

JACOBI'S ATLAS OF DERMOCROMES

EDGAR'S
PRACTICE OF OBSTETRICS

FOR STUDENTS AND PRACTITIONERS
OF MEDICINE

BY

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IN THE CORNELL UNIVERSITY MEDICAL COLLEGE, ETC.

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JACOBI'S ATLAS OF DERMOCHROMES

WITH
ENTIRELY NEW AND ORIGINAL TEXT

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IN TWO VOLUMES

WITH THREE HUNDRED AND TWENTY-TWO COLOURED
ILLUSTRATIONS AND TWO HALF-TONE FIGURES ON
ONE HUNDRED AND SIXTY-NINE PLATES

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Preface

THE present volumes represent the fourth English edition of the well-known Jacobi-Pringle "Atlas of Dermochromes." A large number of new plates are now included which have been added by Dr. Karl Zieler, and are used by him in his valuable textbook. While a new text has been written the original plan has been preserved, the descriptive matter being limited to the essentials necessary for diagnosis and treatment. A word may be said about the new arrangement of the subject-matter and plates. Following the model of Dr. Darier, diseases with similar morphological characters, or with some other distinguishing clinical feature, have been brought together into groups; this method possesses many practical advantages, and is seemingly better suited to the purposes of the Atlas than one of the more rigid systems of classification. As a result of this rearrangement, in a very few cases one of the two illustrations on a plate is unavoidably out of its proper place.

The original papers and textbooks of many authorities on dermatology have been consulted, in particular those of Dr. J. H. Sequeira, Dr. J. M. H. MacLeod, and Dr. J. Darier, to whom the writer desires to express his indebtedness. On the subject of the infectious fevers, the opinions of the late Dr. C. B. Ker have been freely quoted in many places.

Throughout the text the teaching of the late Dr. Pringle, who was responsible for the earlier English editions, must often find expression, for the writer had the good fortune to be associated with him in his hospital practice for many years. He desires here to pay this tribute to the memory of his former teacher.

In conclusion, the author wishes to acknowledge the help and consideration he has received from the publishers of the Atlas.

HENRY MacCORMAC.

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ATLAS OF DERMOCROMES

Erythema

Erythema is characterised by a redness of the skin due to temporary vascular congestion. This redness can therefore be caused to disappear when light pressure is applied, but returns immediately the pressure is discontinued. Erythema may result from a variety of different causes: external, from physical and chemical agents; or internal, from drugs, infections, alimentary intoxication, and in other ways. While a varying degree of redness is present as a part of the make-up of a great number of eruptions, in the group to be described the congestion constitutes the distinguishing feature of the several diseases.

Erythema Exudativum Multiforme (Plates 1, 2, 3)

Under this heading are grouped a number of similar eruptions having the common feature of erythematous patches with marked serous exudation. The lesions may assume different forms—papular, vesicular, or bullous. The disease is most commonly met with in young persons, and runs its course in from one to five weeks. A second or third attack is not unusual in the same individual, the eruption reappearing after an interval of weeks or months. A chronic variety of the disease is occasionally met with where the lesions continue to appear during long intervals, even up to a year or more.

Etiology

The causes of the condition appear to be numerous and different, for it has been observed following injections of horse serum (diphtheria antitoxin), and after vaccination. It is also associated with certain infections such as tonsillitis and arthritis, and in a few cases streptococci have been cultivated from the blood-stream during the acute phase, which may explain the much-disputed connection between erythema multiforme and rheumatism. Focal sepsis, of the oral cavity,

pelvis or elsewhere, accounts for some cases, while in others no definite cause can be discovered. In uræmia an erythematous eruption is occasionally encountered.

Symptoms

The eruption may be accompanied by general disturbance in the form of fever, malaise, and occasionally arthritis. In some individuals the lesions itch considerably; in others there may be tension and burning, or there may be an entire absence of all subjective sensation. The eruptive elements are generally symmetrically developed on both sides of the body, and especially on the backs of the hands and wrists. The elbows, knees, forehead and neck, and the dorsal surfaces of the feet, are liable to implication, and in extensive cases large areas of the surface of the body may be affected.

Diagnosis

The diagnosis of erythema multiforme is usually easy to make on consideration of the type of eruption, its distribution and history. The eruptive lesions may be of different kinds, but all have as an essential feature vascular dilatation; the condition is, in fact, a multi-form erythema.

The following types are met with:

Maculo-Papular Type (Figs. 1, 2, 3, 6).—Here disc-like red spots appear on the backs of the hands and elsewhere, varying in size from a pin-head to a half-crown or larger. The larger elements may become joined together into irregular patches with a polycyclic contour. The lesions may be bright red or the redness may be most marked at the periphery, the centre then assuming a livid blue tint and often flattening down, so that a red ring with a depressed darker centre results. Sometimes the eruption consists of red urticated papules of varying size and vivid red colour, or the effusion of serum may produce a central white tint, as in urticaria.

Erythema Iris.—In this variety the elements are seen in the form of a series of concentric rings, the first ring extending outwards and other smaller rings forming within it. The centre may be marked by a papule or vesicle, and where, as occasionally happens, the different rings assume different shades, a striking appearance not unlike a target is produced. In this form of the eruption the tendency to recurrence is marked, and implication of the mucous membrane of the mouth and nose is relatively common.

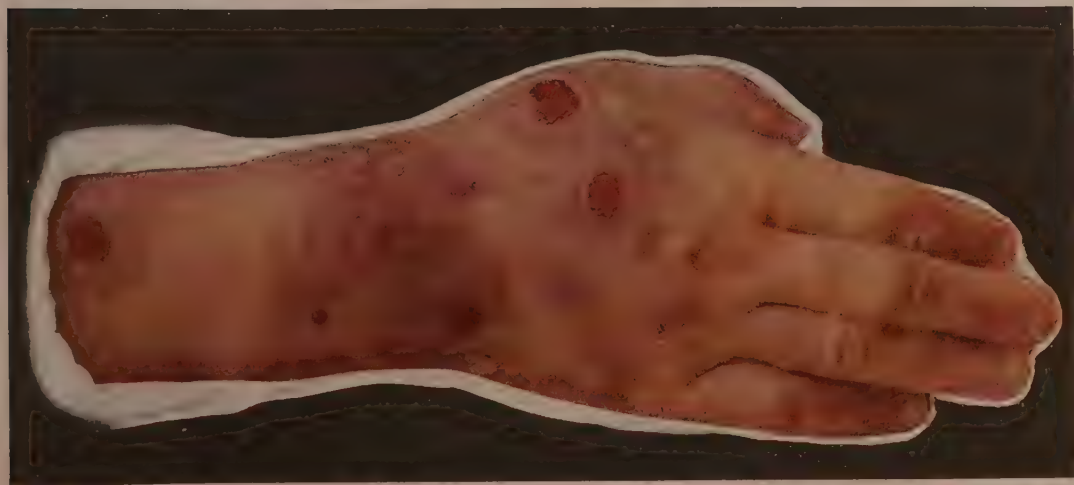


Fig. 1, 2, 3. Erythema multiforme



Fig. 4. Erythema multiforme (Erythema purpuricum)



Fig. 5. Erythema multiforme
(Erythema vesiculosum)

Erythema Vesiculosum and *Bullosum* (Fig. 5) are terms used to describe those forms where well-marked vesicles or blisters develop on the erythematous areas. The contents, at first clear, become cloudy and purulent from invasion by pyococci. If rupture occurs, a moist red surface or a crust marks the site previously occupied by a bulla.

Erythema Purpuricum (Fig. 4).—In this form hæmorrhages occur in the skin, the purpuric lesions differing from the erythematous, with which they are associated, in that they do not disappear on pressure.

Mucous Membranes.—Lesions on the mucous membranes are not infrequent and, in rare cases, blister formation in the mouth and throat may be of such severity as to prevent the patient from taking any but liquid nourishment. In these severe cases the buccal cavity becomes foul and painful.

The history records the sudden appearance of the lesions in crops, generally accompanied by local itching, and lasting several weeks. A previous similar attack may be described. There may be no, or only slight, general disturbance, or there may be some degree of fever, with joint pains or even swelling of one or more joints. Where the eruption is accompanied by severe constitutional disturbance, this is sometimes to be attributed to the presence of one of the infective diseases, such as pneumonia, endocarditis, or acute tonsillitis; in these cases the two conditions—the erythematous eruption and the endocarditis, etc.—may be considered as an effect of the same cause.

Differential Diagnosis

The condition has to be distinguished from urticaria, where the more irregular disposition of the elements, their form (wheals), and their intensely itchy nature are sufficiently distinctive. Occasionally erythema multiforme bears a superficial resemblance to smallpox, but the evolution of the smallpox lesion is entirely different. Where the eruption is fading, and where it involves the palms and buccal mucous membrane, secondary syphilis may be suspected. The courses followed by the two diseases are, however, dissimilar; other evidence in favour of syphilis, such as adenitis, is wanting and, unless the patient has had syphilis previously and has not been cured of it, the Wassermann reaction is negative. The relapsing forms of erythema multiforme, particularly the bullous and vesicular types, closely resemble dermatitis herpetiformis, from which they are sometimes only distinguished with difficulty. The herpetiform grouping of the lesions in the latter disorder, their distribution and their marked pruriginous character are

generally sufficient to separate the two complaints. The eruption of lupus erythematosus may bear a close resemblance to the disease under consideration, especially in its acute type. In the chronic type, the tendency of lupus erythematosus to form atrophic areas, and distribution on the nose and cheeks, should prevent mistake.

Treatment

In the common form of the disease, simple measures will generally suffice to guide it to a termination. The itching can be relieved by local applications such as calamine lotion or a dusting powder; or the following formula may be employed: liquor picis carbonis, m.x.; liquor plumbi subacetatis, miii.; water to 1 ounce. If raw areas from ruptured bullæ are present, a bland ointment should be prescribed, any crusts being previously softened and removed. A simple diet is desirable, and, where the eruption is extensive and accompanied by constitutional symptoms, this and rest in bed are essential. As the disease is attributable to a variety of causes, the one operative in each case, especially in the chronic or relapsing forms of the disease, should be sought for, such as focal sepsis in the region of the mouth, throat, or nose, alimentary intoxication, the taking of some drug, or disease of the kidneys or liver. Where, as will often happen, no definite cause can be discovered, general treatment may be carried out by the administration of calcium lactate (grs. x.) thrice daily for two or three days, this being repeated after a short interval. Intestinal antiseptics, such as salol, are occasionally of distinct use. Salicin or salicylate of soda have been advocated by those who believe that the disease is in some way connected with rheumatism. It is questionable, however, whether these drugs have any real effect on the disease; they may serve to relieve the joint pains where such a condition exists. In the chronic forms a vaccine prepared from the intestinal flora will sometimes cause the lesions to clear up, either from the specific action of the vaccine or as the result of non-specific desensitisation of the tissues following the injection of a foreign protein. Small doses of X-rays often succeed in removing resistant lesions on the hands.

Erythema Nodosum (Plate 3, Fig. 7)

Erythema nodosum is considered by many to be merely a variety of erythema multiforme. While this view finds support in the occasional association of the two diseases together, and in certain intermediate forms that may sometimes be seen, it is convenient to describe the condition under a separate heading.



Fig. 6. Erythema multiforme



Fig. 7. Erythema nodosum

Etiology

All that has been said of the etiology of erythema multiforme applies to erythema nodosum. In addition, the following causal conditions may be referred to : lesions indistinguishable from erythema nodosum have been met with in association with kerion ringworm, and in one such case a ringworm fungus was successfully cultivated from an excised node. A relationship between erythema nodosum and tuberculosis has been also demonstrated by Landouzy, who found the tubercle bacillus in the blood-vessels of a nodule, and succeeded in infecting a guinea-pig with tissue from the same lesion. These cases may be regarded as examples of the condition termed sensitisation. An eruption presenting all the features of erythema nodosum may result from the taking of iodides or bromide, as in a case under the observation of the writer. Cranston Low holds that there is a true erythema nodosum (a specific infection), and also a false erythema nodosum occurring in tuberculosis, ringworm, syphilis, and leprosy, and he adds that both are sensitisation phenomena, similar skin reactions being produced by different antigens.

Symptoms

The disease is most often observed in young people, the incidence being higher among females. The eruption, in the form of raised, oval or round, tender and painful, bright red swellings, appears abruptly on the shins, occasionally on the forearms, arms, face, feet, and thighs. The individual lesions vary in size from a pea to a small egg, each passing through a definite course lasting from one to two or three weeks, the colour gradually fading; the final stage may resemble a bruise (erythema contusifforme). There may be but one lesion, or as many as twenty or thirty. The rash is usually accompanied by general symptoms, such as fever, while pain or swelling of the joints is not very uncommon.

Diagnosis

The appearance of the lesions, their distribution, course, and painful nature are characteristic. The occurrence of nodose lesions, which cannot be distinguished from "true" erythema nodosum, in leprosy, kerion ringworm, syphilis, and tubercle, and from iodides and bromides, should be borne in mind. A syphilitic gumma on the leg is differentiated by its tendency to break down and ulcerate, by other evidence of syphilis, and by the Wassermann reaction. In erythema induratum (Bazin's disease) the lesions are of slow evolution, persisting for months, and tending to leave pigmented scars.

Treatment

Rest in bed, a light diet and attention to the bowels are demanded in every case. Where rheumatic pains are complained of, salicin or salicylate of soda may be given in the usual doses. The pain in the actual lesions, often of a considerable degree of severity, is best relieved by hot fomentations constantly applied, or by diluted lead lotion on lint. Where the cause can be discovered, as in some forms of "false" erythema nodosum, the appropriate treatment of the causal condition will be demanded in addition to the local remedies. Sequeira has observed the association of rheumatic fever with erythema nodosum in 20 per cent. of his cases. In such circumstances the possibility of coincident endocarditis should be kept in mind.

Erythema Pernio (Chilblains) (Plate 4, Fig. 8)

This common disfiguring and painful affection is so well known as to demand but little description. It is chiefly met with in young people, in females more often than males. The condition prevails during the colder months of the year, disappearing with the advent of warmer weather. The individual lesion consists of a tumid, dark red, erythematous patch of variable dimensions upon which bullæ may develop, or ulceration may occur, with subsequent scarring. The distribution includes the extremities, the hands and feet, and occasionally the nose and ears. The lesions may be numerous or few; in the former case a symmetrical disposition is common. Itching is a marked feature, or, if the affected area is exposed to heat, actual pain. In the individuals affected with this disease a condition of acro-asphyxia is frequently observed, the hands being blue, congested, and cold, features supposed to indicate in popular terminology a "bad circulation." In a certain proportion of cases there may be some degree of adenitis, possibly an attenuated form of tuberculosis, from which it has been argued that chilblains may belong to the group of eruptions classified as tuberculides. Although authorities emphasise the co-existence of a "delicate" state, or of some predisposing cause, it is a fact that many of those who suffer from the complaint appear otherwise in robust health.

Differential Diagnosis

Lupus erythematosus, when it affects the hands, is liable to be mistaken for chilblain. Lupus erythematosus is distinguished by the facts that in it scar tissue is formed, that the condition persists during

the warmer weather, and that it is generally associated with other lesions on the nose, cheeks, or ears. In the rare disease lupus pernio, purple swellings resembling chilblains may be seen on the extremities, cheeks, and ears. But the disease has not the seasonal incidence characteristic of chilblain, some or all of the fingers present a fusiform contour, and an X-ray photograph reveals in the bones of the hands and feet curious clear areas. Chilblain is distinguished from the papulo-necrotic tuberculide occurring on the hands by the evolution of the elementary lesions in the latter disease: a series of papules form, undergo central necrosis, and resolve, leaving a small scar.

Treatment

In the common form of the disease, various local applications may be prescribed. The lesions may be painted with tincture of iodine, care being taken not to produce iodine dermatitis by long-continued applications. Darier recommends local baths of peroxide of hydrogen (6 volumes), repeated two or three times daily, each bath lasting fifteen minutes. A simple dusting powder often relieves the itching and protects the inflamed area, such as powdered starch (50 parts), zinc oxide and boric acid (of each 25 parts), or menthol (grs. xxx.) in olive oil an ounce, may be employed, or dressings of dilute lead lotion. Care should be exercised, when lotions or greasy applications are used, to avoid maceration of the fragile epidermis. When the chilblain has become broken and ulcerated, antiseptics, such as boric ointment or fomentations, are demanded, or the following may be used: ammoniated mercury (grs. x.), zinc ointment (an ounce). X-rays have often a distinct effect on the disease, a one-third pastille dose being given to the affected area and repeated in a fortnight, and again if necessary. In those subject to chilblains, it has been observed that several short exposures of the parts about to be affected prevent the occurrence of the eruption. Great caution should be exercised, in employing X-rays, to avoid chronic radio-dermatitis, arising months or years afterwards, as the result of too many exposures or too heavy a dosage. Ultra-violet light, where the whole body is exposed in the usual manner, has a definite property of preventing and curing chilblains. The general treatment is important. Any abnormal condition discovered should be rectified, and general tonics—arsenic or iron, or cod-liver oil—administered, with the object of preventing and curing the disease. Calcium lactate in 10 to 15 grains, given thrice daily for three days, discontinued for four days, and repeated, often produces striking results. This intermittent administration secures the full benefit of the drug.

Thyroid is sometimes prescribed with advantage. In those liable to chilblains, precautions should be taken against the effects of lowered temperature by wearing warm gloves and stockings in cold weather, and drying the hands carefully after washing. If the feet tend to become moist from perspiration, the stockings should be changed, the feet carefully dried, and a simple dusting powder applied.

Erythema Intertrigo

This may be met with in fat individuals in the groins and thighs, on the abdomen, and in women under the breasts. The condition is largely traumatic, resulting from friction and maceration of the skin by the sweat. Simple dusting powder or calamine lotion generally effects a cure. Erythema intertrigo is distinguished from eczema arising in similar situations by the presence in eczema of the characteristic vesicular element. Intertrigo is also met with in fat infants in the groins and other flexures, and is treated in a similar manner. The erythema may affect the napkin area (napkin erythema), the convex surfaces of the buttocks and neighbouring regions being involved and the flexures spared. As this condition usually results from soiling with discharges, cleanliness, keeping the part dry, powdering, or protecting with boric ointment will usually suffice.

A variety of this condition, a *vacciniform dermatitis of infants* (Plate 4, Fig. 9), demands special and separate mention, because of its resemblance to congenital syphilis. Its several characters are indicated by the different names given to it by different observers. The eruptive elements may present different aspects—erythematous macules, which may become coated with creamy exudate, or papules similar in appearance to syphilitic papules; the papules may extend, forming areas with an eroded centre. Vesicles or bullæ may be seen, and if these become purulent and umbilicated, a vacciniform aspect is produced. The condition, an uncommon one, is generally considered to be of streptococcal origin, is auto-inoculable, and is in no way related to syphilis. The lesions occur on the buttocks, thighs, and peri-anal region in infants, and occasionally in other situations, such as the legs. Treatment is simple and satisfactory, and includes constant cleansing of the lesions, the use of weak antiseptic lotions, dusting powders, and, where erosions have occurred, a 2 per cent. ammoniated mercury ointment.



Fig. 8. Erythema Pernio
(Chilblain)



Fig. 9. Erythema papulosum posterosivum
(Vacciniform dermatitis of infants)

Differential Diagnosis

The eruptions affecting the napkin area in infants, and especially vacciniiform dermatitis, have to be distinguished from congenital syphilis. This is done by the history; by observing other syphilitic manifestations, such as wasting, "snuffles," and an eruption on the palms and soles; by examination of the father and mother, including the Wassermann reaction; by the Wassermann reaction in the child, and the discovery of the *Spirochæta pallida* in the actual lesions.

Rosacea (Acne Rosacea) (Plate 5, Fig. 10)

A chronic affection of the central region of the face and forehead, beginning with temporary flushing, developing further to permanent erythema, with which are commonly associated pustules and telangiectases. Marked hypertrophy of the nose may also occur (rhinophyma).

Etiology

The disease affects both sexes, but is five times more common in women (Fox). It appears about the fortieth year, occasionally much earlier, disappearing in advanced age. Chronic dyspepsia, indiscretions in diet, excessive tea drinking, indulgence in alcohol, and in women uterine and ovarian disease, all have a causal relationship. Hypochlorhydria or achlorhydria have been noted by Barber and Ryle in a number of cases; in others, the gastric analysis indicates a normal condition. The influence of focal sepsis is shown by the remarkable improvement in some instances following the extraction of infected teeth, or, as Sequeira has recorded, when a diseased appendix is removed.

Symptoms

In the earliest stages of the disease there may be no more than sudden flushing of the face after meals, and on exposure to heat, wind, or cold. This temporary erythema later becomes permanent, and after a time a further development takes place in the form of small, prominent vessels on the nose, cheeks, and chin. The skin of the face assumes a coarse, thickened aspect, with prominent and hypertrophied sebaceous glands culminating in papules; an eruption of pustules, a common sequel, especially in seborrhœic individuals, completes the picture. The condition may be met with in varying degrees, from slight temporary flushing to marked coarsening of the skin and marked pustulation. While the distribution usually includes the forehead, nose, cheeks, and chin, the nose may be mainly involved, becoming red and swollen, with

numerous telangiectases coursing over its surface. In a few individuals a peculiar form of hypertrophy of the nose, termed rhinophyma (Fig. 135), develops, where lobulated masses pitted with dilated follicles cause great disfigurement.

The association of eye lesions with rosacea is not uncommon, although it is rarely mentioned in textbooks on dermatology. Cranston Low classifies them into three groups—blepharitis, conjunctivitis, and keratitis—and points out that the incidence of the eye lesions does not depend upon the severity of the rosacea.

Differential Diagnosis

As a rule, diagnosis presents no difficulty. In younger individuals acne may have to be considered; comedones are present in acne, and absent in rosacea. Certain forms of iodide and bromide eruptions mimic rosacea, but in such cases there is a history of taking the drug. Rosacea is distinguished from lupus erythematosus by the sharply demarcated patches in the latter disease, their tendency to atrophy, and scale productions.

Treatment

In the treatment of this disease both general and local measures have to be considered. Where there is marked flushing, calamine lotion, without glycerine, will generally be found effective, and if there is a seborrhœic element or pustulation, there may be added precipitated sulphur in the proportion of 10 grains to the ounce. Or sulphur ointment (2 per cent. or stronger) may be prescribed for use at night, especially in the papulo-pustular forms of the disease. As some patients are intolerant of sulphur, others of greasy applications, it is advisable to watch the earlier effects of these remedies. Conspicuous vessels can be obliterated by electrolysis, a needle attached to the negative pole being inserted into the vessel; a current of 1 or 2 milliamperes is sufficient. Or the vessels may be destroyed by scarification. The papulo-pustular and hypertrophic forms are benefited by X-rays in small doses (the equivalent of one-third to one-half of a Sabouraud pastille dose) at intervals of fourteen to twenty-one days. To avoid any risk of a radio-dermatitis, not more than three such applications should be given in a series.

General treatment is of even greater importance than local. A search should be made for the cause, possible focal sepsis in the teeth, pelvis, abdomen or elsewhere being considered. Intranasal disease accounts for some cases. As dyspepsia is so often found in association



Fig. 10. Rosacea

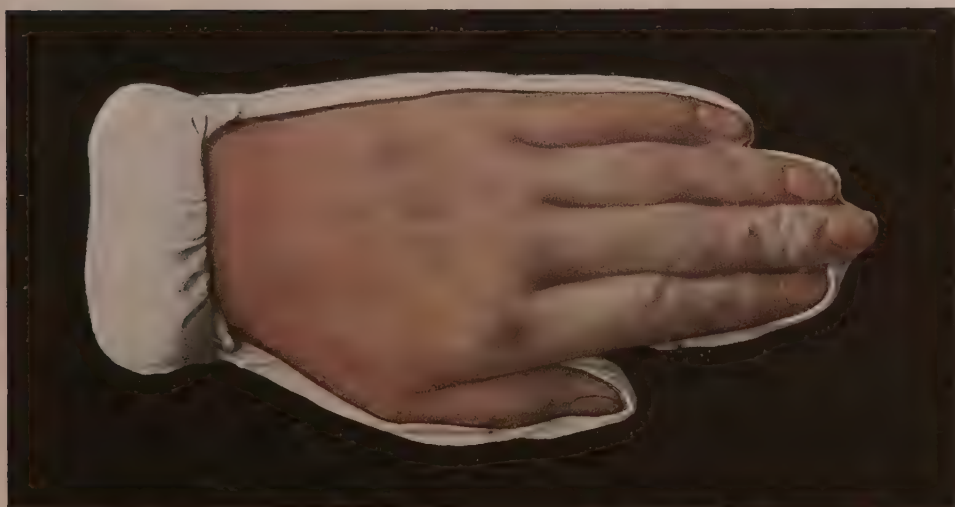


Fig. 11. Morbus Raynaud

with rosacea, attention should be paid to any disorder or abnormal condition of the stomach or intestine, including constipation. The diet demands careful regulation in every case, all highly-spiced or salted dishes, condiments, pickles, and similar things being forbidden. Although alcohol is often blamed, tea is a much more constant causal factor, and should be avoided or only taken occasionally, and then freshly made. Coffee, especially black coffee, is equally to be condemned.

Ichthyol, given by the mouth, has a distinct effect in controlling the flushing. It may be given in all stages of the disease, either in pill form (grs. iii.) before meals, or in capsules (grs. v.) night and morning. The unpleasant taste is disguised by coating the pills with keratin. At the same time bismuth and soda may be administered after meals.

Although the measures described above are often remarkably satisfactory, there are a number of cases where little or no improvement takes place. Great importance, therefore, attaches to the recognition of the condition in its earliest stages, a time when the best and most permanent results can be obtained.

Raynaud's Disease (Plate 5, Fig. 11)

A disorder affecting the extremities, characterised by local syncope, local asphyxia, and symmetrical gangrene, due to vascular spasm.

Etiology

The condition is met with after exposure to cold, occurs in adults of both sexes, and is of a relatively greater frequency among women. The actual cause of the disease has not been determined, although a syphilitic origin appears to have been established in certain cases. The syndrome is generally classified among the functional disorders, no gross change being discoverable in the blood-vessels of the parts affected. Paroxysmal hæmoglobinuria is an occasional complication.

Symptoms

While varying degrees of the affection occur, in its classical form three stages are observed: (1) *Local syncope*, where one or more fingers, or the whole hand, becomes white, cold, and numb. This may pass off in a few minutes, or may continue for hours or days. (2) *Local asphyxia*, generally representing a later stage, or arising independently. The fingers or toes are swollen, livid, and congested, and assume a dark red or reddish-blue tint (acro-asphyxia). The patient complains of

considerable pain. Abdominal disturbance in the form of colic sometimes accompanies the attack. Temporary amblyopia has also been observed. In this stage there is a special liability to recurrence. (3) *Symmetrical gangrene*, constituting the extreme degree of the condition. Small necrotic areas form in the skin of the fingers, ears, or toes, sometimes preceded by bullæ; or the necrosis may be of greater severity and extent, involving the whole hand or foot. In exceptional cases, gangrenous patches are found in other situations. Even in the less severe types scarring and deformity occur as a sequel to the gangrenous process.

Differential Diagnosis

Raynaud's disease has to be distinguished from other gangrenous conditions of the extremities, such as those depending upon definite or obvious disease of the blood-vessels, in which syphilis plays an important part. In Morvan's disease there is a peculiar destruction of the terminal phalanges, resulting in marked mutilation. This condition may resemble in its earlier stages a painless whitlow, and is actually a form of syringomyelia. Diabetic gangrene involves the extremities or the genitalia; with it other symptoms pointing to the cause are present.

One form of sclerodermia (sclerodactyly) resembles Raynaud's disease, especially when it begins in the extremities with "dead" fingers. The condition is not spasmodic, and eventually the affected fingers become hard, tapered, and the skin atrophic. The ears and toes may also be involved.

Treatment

Where so little is known of the cause, treatment must be unsatisfactory. Any abnormal condition should be rectified, and the extremities protected from cold. If syphilis exists, a series of arsenical injections may be given in suitable cases. Local treatment has as its object the restoration of the circulation in the affected parts, and includes stimulating friction and massage. Some patients derive benefit from the constant current employed in the following manner: The hand or foot is placed in a saline bath with the negative pole, and the positive pole is applied higher up the limb, the current being regulated by the patient's degree of tolerance. Where gangrene occurs, antiseptic dressings are applied in the usual manner.

Purpura

The condition termed purpura is recognised by the occurrence of spontaneous hæmorrhages of varying size and degree in the skin and mucous membranes. In many cases the eruption is merely a symptom of some known disease or infective process.

Pathology and Etiology

Purpura occurs in both sexes and at all ages. While the eruption is obviously due to extravasation of blood, this fact only goes a little way towards explaining the nature of the condition. Present opinion favours an infective origin in many cases, and the cultivation of micro-organisms from the actual eruption supports this belief. The occurrence of purpura in certain infective diseases—for example, cerebro-spinal meningitis—may be cited in this connection. The peculiar alterations observed in the blood, such as an increased coagulation time and diminution in number of the blood platelets, cannot be interpreted with precision because of their inconstant character.

Symptoms

It is customary to divide purpura into two groups: primary purpura where the eruption is the dominant or only feature, and secondary purpura where some disease or intoxication exists of which purpura is a recognised symptom.

Primary Purpura.—The following forms are described:

(a) Purpura simplex affects children more than adults. The eruption appears in crops, usually on the lower extremities. Constitutional disturbance is slight or absent.

(b) Purpura hæmorrhagica of Werlhoff only differs from purpura simplex in its greater severity. The eruption appears abruptly, sometimes preceded by bleeding from the nose or gums. The cutaneous lesions may be extensive, the mucous membranes are affected, hæmorrhage from the nose or mouth is characteristic. Where the bleeding is severe, marked anæmia or, in rare cases, death may result.

(c) Purpura rheumatica (Schönlein) differs from the above: first, in the occurrence of joint pain or swelling, vomiting, and fever; and, secondly, in the association of wheals and erythematous lesions with the

purpuric elements. These features, its tendency to recurrence, and probable infective origin, suggest a relationship with erythema multiforme.

(d) Henoch's purpura is characterised by its severity, and especially by the general symptoms which accompany the eruption, including abdominal pain and tenderness, diarrhoea, the evacuation of blood, vomiting, and sometimes hæmatemesis. These features may be of such a nature as to suggest intussusception where, as is more common, the disease occurs in children. The urine may contain albumin or blood. The purpuric eruption is often associated with erythematous or urticarial lesions.

Diagnosis

The purpuric element does not disappear on pressure, and is thus distinguished from an erythematous lesion. In all cases care should be taken not to overlook the various diseases or morbid conditions with which symptomatic or secondary purpura is associated.

Secondary Purpura.—Purpura occurs as a symptom in a great variety of conditions. In the following list, the more important are included for reference:

Specific fevers: Hæmorrhagic forms.

Infections: Septicæmia, pyæmia, meningitis, infective endocarditis.

Visceral disease: Disease of the liver, chronic nephritis.

Blood diseases: Leukæmia, Hodgkin's disease, severe anæmias, hæmophilia.

Deficiency diseases: Scurvy, infantile scurvy.

Drug eruptions: Potassium iodide, salicylates, antipyrin, etc.

Cachectic states: Cancer and advanced tuberculosis.

Nervous diseases: In association with tabetic crises.

Treatment

In the lesser forms little more than rest in bed is demanded. It is well in every case to consider the possibility of more serious developments, for it is not easy to foretell in what manner even a simple purpura will terminate. The general treatment includes the administration of iron, salicylates, or calcium lactate when the coagulating time of the blood is increased. In severe hæmorrhage, injections of horse serum in large doses (10 to 20 c.c.) or auto-hæmotherapy has been employed with success. Adrenaline chloride (1 in 1,000) by the mouth or intravenously is useful in selected cases. Search should be made for any forms of infection in the teeth, tonsils, or elsewhere. The causal organisms can sometimes be identified by blood culture or by culture made directly from the lesion.



Fig. 12. Purpura haemorrhagica



Fig. 13. Urticaria rubra

Urticaria

PLATES 6 AND 7, FIGS. 13 AND 14

Urticaria is distinguished by itchy elevations on the skin, red or white, termed wheals. It may be acute or chronic, and in very many cases is to be regarded as a manifestation of the condition termed sensitisation.

Etiology

Urticaria may be met with at any age. The essential element owes its red colour to a dilatation of the cutaneous vessels, its elevation to serous exudation, which may further compress the vessels, producing the white variety of lesion or, if excessive, a bulla. Cellular infiltration is a constant feature.

Urticaria may be due to local or general causes. The local causes include the stings of nettles or jelly fish, or other external irritants. The general causes are numerous and diverse, so much so that in an investigation the observer is often presented with one of the most difficult problems in medicine. Urticaria may follow the ingestion of certain foods, the use of drugs, or appear in the course of other diseases, such as leukæmia and Bright's disease. Focal sepsis should be included, because infections of the accessory nasal sinuses, the antrum, the teeth and tonsil, are undoubted causes of urticaria. Nor should emotions be omitted from the category, for there are cases where urticaria can only be explained on such an hypothesis.

Although these different conditions appear to have little in common, the relationship of most, if not all of them, to urticaria may be explained on the theory of sensitisation. The simplest example of this condition is met with after injections of horse serum. An individual contracts diphtheria, for which antitoxin (horse serum) is administered. The individual may thus become sensitised to horse serum, and, in consequence, if a second injection is given after a certain time, the sensitised tissues react to the antigen (in this case horse serum), an urticarial rash

resulting. Another individual becomes sensitised to some vegetable or animal albumin in the food. When the particular food is eaten, the antigen is liberated, comes into contact with the previously sensitised tissues, and urticaria results. Or an antigen derived from bacterial products, formed in some septic focus in the teeth, antrum, or bowel, first sensitises the tissues, and then, coming in contact with them, causes urticaria.

The term idiosyncrasy is applied to those cases where a peculiar and special state of the tissues causes the patient to react on the first contact with the antigen.

Diagnosis

Urticaria is recognised by the presence of itchy wheals, red or white, of varying size and shape. The lesions appear in crops, last for some hours and then fade, leaving no mark. If wheals are not seen when the patient is examined, the diagnosis is made by the history. All parts of the body can be affected, including the mucous membranes. The following varieties are met with:

1. *Acute Urticaria*.—The rash appears suddenly, and is widely distributed. General disturbance, in the form of diarrhoea and vomiting, fever, and other signs of intoxication, usually accompanies the eruption. The condition is often due to tainted food, especially fish, runs its course in a few days, or the rash may persist, as in chronic urticaria.

2. *Giant Urticaria (Angioneurotic Œdema)*.—A form in which considerable swellings appear suddenly on the face and elsewhere, often during the night. There is a tendency to involve the mouth, tongue, and genitals. The disease may occur in several generations.

3. *Chronic Urticaria*.—The eruption continues to appear at longer or shorter intervals over a period of months or years.

4. *Factitious Urticaria (Dermographism)*.—In certain individuals wheals result regularly from any mechanical irritation. Itching is absent or negligible.

5. In rare cases the wheal may become bullous or hæmorrhagic; these forms are designated *urticaria bullosa* and *urticaria hæmorrhagica*.

6. *Papular Urticaria*.—See Fig. 15.

7. *Urticaria Pigmentosa*.—See Fig. 162.

Treatment

In the *acute form* a purgative, such as castor oil, should be given, and a simple régime followed for a few days. A lotion to relieve the itching may be prescribed, such as dilute lead lotion (℞.), liquor picis carbonis



Fig. 14. Urticaria

(m.x.), water to 1 ounce. In the *chronic forms*, investigation of the cause is of the first importance. Possible focal infection of the teeth, tonsils, and accessory nasal sinuses should be considered; a severe example of giant urticaria under the writer's observation cleared up when an infected antrum was drained. Worms are occasionally the cause of urticaria. Where some article of food is suspected, a careful enquiry may enable the offending substance to be identified; or the investigation may be made by the cutaneous tests, where alkaline solutions of group proteins are applied to the scarified skin of the forearm: a definite wheal indicates sensitisation of the individual to the particular protein causing the reaction. This method, one of great theoretical interest, has not proved entirely satisfactory in its practical application. Where the cause cannot definitely be determined, treatment is carried out on general lines. Intestinal antiseptics, such as salol or ichthyol, may be given, and the appropriate remedies for constipation administered. Some cases respond well to quinine, others to calcium lactate given in 15-grain doses thrice daily, the administration being discontinued after three days, and then resumed again. Thyroid has proved successful in a number of cases. With the object of desensitising the patient, whole blood injections are given in the following manner (auto-hæmotherapy): 5 c.c. of the patient's blood are withdrawn from a prominent vein in the bend of the arm, and, to prevent clotting in the syringe, immediately reinjected high up in the buttock. The injections are repeated at five to seven-day intervals on seven or more occasions; or desensitisation may be attempted, especially where food is suspected as a cause, by administering $\frac{1}{2}$ gramme of peptone in cachet form before meals. To relieve the itching, the lead and tar lotions given above may be applied, or calamine lotion or liniment may be employed. Some patients derive benefit from baths containing $\frac{1}{2}$ ounce of cyllin or 4 ounces of carbonate of soda to the full bath.

Papular Eruptions

In certain skin diseases the eruption is composed of papules, solid elevations of the skin of limited duration and different form. This element may undergo various modifications, as in the papulo-necrotic tuberculide, but in the diseases considered below, with the exception of lichen urticatus, the papule is present in simple form.

Lichen Urticatus (Strophulus : Papular Urticaria, Simple Prurigo) (Plate 8, Fig. 15)

A disease of early infancy and childhood characterised by wheal formation, the wheals either presenting a central papule, or fading and leaving a papule in their place.

Etiology

This disease, a common one, is most often met with in infants, but may also be seen in older children, and very occasionally in adults. The popular belief that the eruption is related to the cutting of the teeth finds support in its onset at the period of dentition. Over-feeding, improper feeding, or some form of gastro-intestinal disturbance, are all recognised causal factors.

Symptoms

The eruption appears as red elevated blotches, most marked at night. These may be relatively less during the day, or may be almost entirely replaced by hard papules, sometimes assuming a flat burnished form resembling the papule of lichen planus. The lesions continue to appear during weeks or months, and where the disease is of prolonged duration, the spots may die down during winter, the condition becoming again active in the warmer weather. Itching is a marked feature, the infant rubbing or scratching the affected parts vigorously. In spite of this, the general health is, as a rule, but little affected. Where the



Fig. 15. *Urticaria papulosa infantum* (Strophulus)



Fig. 16 and 17. Prurigo Hebrae

disease continues after the third year, a form of Hebra's prurigo should be suspected. The papule is sometimes capped by a tiny scale or crust, or in some cases may present a distinct vesicle, rarely a bulla. Secondary excoriations, the result of scratching, are often observed.

Diagnosis

The recognition of the disease usually presents no difficulty. The resemblance of one phase of the eruption to lichen planus has been referred to above; the conditions diagnosed in infants as lichen planus eventually show themselves to be lichen urticatus. From scabies the disease is distinguished by the following characters: in infants scabies attacks the feet especially, and vesicles or the pathognomonic burrow containing the acarus occur in this situation. As scabies is a contagious disorder, the mother, nurse, or another child will commonly be similarly affected.

Treatment

Although in theory the treatment of this disease might appear to be within well-defined rules, in practice the results of treatment are far from satisfactory. Any improper method of feeding should be corrected, and the clothing by night and day so arranged as to avoid overheating. Small doses of gray powder may be given; to allay the itching, the lead and tar lotion employed in urticaria serves a useful purpose. Inunction of the body with a 2 per cent. ointment of naphthol in vaseline is of distinct advantage in many cases. To obtain rest at night, hypnotics, such as chloral hydrate or small doses of antipyrin, may be demanded. Methods of desensitisation of the tissues offer a possible solution to the problem, especially in the chronic forms.

Hebra's Prurigo (Plate 9, Figs. 16 and 17)

A chronic skin disease beginning in infancy, and signalised by intense itching, papules and excoriations, and glandular enlargement.

Etiology

The term prurigo has been variously applied to a number of different conditions with confusing effect. It designates certain forms of papular eruption accompanied by itching. In Hebra's prurigo the disease is noted to begin in infancy, to be associated with intense itching, and in

the severe forms to last throughout life. The papules are due to an oedema of the true skin with an inflammatory cellular exudate. Many observers insist that the itching is primary and the papule secondary. The frequent association of asthma with prurigo suggests that the condition is due to some form of sensitisation.

Symptoms

In the infant the disease often resembles lichen urticatus. The eruptive elements may thus in the earlier phases have an urticarial aspect, but later assume their true papular form. Symmetrically distributed on the extensor surfaces of the limbs, but avoiding the flexures, the eruption may also be present on the trunk and face. The very severe itching is responsible for a number of secondary changes in the form of excoriations, crusts, and scars; the skin becomes thickened (lichenised) and pigmented; an eczematous dermatitis may develop. The effects of the severe pruritus and interference with sleep are profound, the child becoming fretful, irritable, and wasted. In the milder forms of the disease similar phenomena are observed in a lesser degree. On the other hand, in the extreme forms (prurigo ferox), the wretched individual suffers extreme torment until released by death.

Diagnosis

Hebra's prurigo is distinguished by its prolonged course and intense itching, the considerable secondary changes in the skin, and the associated glandular enlargement. In simple prurigo the disease, as a rule, appears later in life. The eruptive element is similar, but the secondary changes less marked. Darier includes in the prurigo group the lichen simplex chronicus of Vidal (Figs. 68 and 69), where infiltrated, pigmented, circumscribed patches occur on the neck, the inner surface of the thighs, or the popliteal space, or elsewhere. Reference should also be made to the prurigo-like eruptions occasionally observed in Hodgkin's disease.

Treatment

The general treatment includes the administration of tonics, such as arsenic and cod-liver oil. The diet should be carefully regulated, all forms of food of a stimulating character being reduced or excluded. To secure repose, sedatives—antipyrin, salicin, or chloral—may be required. Local measures are of importance, and include the treatment of the secondary complications, such as eczematous or pyoderma, by the usual methods. In some cases an alkaline bath (carbonate of



Fig. 18. Lichen planus



Fig. 19. Lichen planus atrophicus

soda, 4 ounces in a bath) relieves the itching temporarily. Inunction of the skin with oil is helpful in some cases, or β -naphthol (2 per cent.) in vaseline may be used.

Lichen Planus (Plates 10, 11, and 12)

In lichen planus the eruption is composed of burnished, flat, itching papules of polygonal shape and red or lilac colour. The mucous membranes are often affected.

Etiology and Pathology

The disease is one of adult life, and while undoubted examples are met with in children, the supposed infantile forms usually prove to be atypical lichen urticatus. The condition has been variously attributed to nervous shock, or to some form of toxæmia. In favour of the former theory are those cases where the disease suddenly appears after a domestic or business crisis. On the other hand, lichen planus was distinctly uncommon in the army during the war. The toxic theory finds support in the form and structure of the papule, the cellular changes being attributed to some toxic substance carried by the blood to the skin. The simultaneous appearance of the disease in more than one member of a family further indicates an infective origin. The histology of the lesion is distinctive, and explains some of the features observed on simple inspection. The kerato-hyaline is unevenly distributed, giving rise to the white striæ observed on the surface of the papule; the horny cells are accentuated, and there is marked proliferation of the Malpighian layer. A diffuse infiltration of round cells in the papillary body, sharply demarcated at its lower limit, completes the picture.

Symptoms

Several clinical varieties of lichen planus are recognised. The distinguishing features of the disease are best represented in the chronic or subacute form described below.

Chronic or Subacute Type.—The evolution in this form is of a slow, progressive nature, the eruption persisting for months, or even years, and being marked by the appearance of new crops of papules from time to time. It is the rule for the patient to complain of itching, and this may assume an almost intolerable severity. In other cases itching is slight or absent. The lesions are distributed over the front of the wrists and forearms, the legs and inner surface of the thighs, the neck,

and elsewhere. Only in very rare cases is the face or scalp involved. Occasionally the palms and soles may be affected, and the nails may show fissuring or other dystrophic changes. In a large proportion of cases the mucous membrane of the mouth exhibits an eruption in the form of white opaline patches or a white network (Fig. 22). The essential lesion is a papule of characteristic aspect. This papule is small, slightly raised, with a flat, burnished surface, of a red or lilac colour, occasionally of the colour of the normal skin, angular or polygonal in outline, sometimes with a central depression or umbilication. Some of the papules remain discrete, others coalesce to form considerable plaques resembling a mosaic, from the exaggeration of the normal lines of the skin which outline and separate the individual lesions. A slight degree of desquamation is not uncommon. The lesions tend gradually to become darker, and to leave behind areas of pigment. The fully-developed papules exhibit on the surface a network of fine white lines, or white punctæ (Wickham's sign). To demonstrate their presence, which is not always easy, the papule may first be treated with vaseline. The association of acuminate lesions with the flat papules is sometimes observed, a form of eruption to which the name of lichen plano-pilaris (Pringle) has been applied.

Diagnosis

The disease is recognised by the type of eruption, its course, distribution, and itchy nature. In doubtful cases it is often possible to discover characteristic papules on the front of the wrist, or the diagnosis may be confirmed by white patches on the tongue or on some other region of the buccal mucous membrane; the patient is usually not aware that the mouth is affected. When, as sometimes happens, the eruption is confined to the mouth, the diagnosis presents considerable difficulty. Lichen planus has to be distinguished from certain other diseases. From psoriasis it differs first as regards the type of lesion—a flat, burnished papule as compared with the silver-scaled lesion of psoriasis; and, secondly, as regards its distribution, psoriasis affecting the elbows, knees, scalp, and elsewhere.

The eruption of lichen planus may be mistaken for the rash of secondary syphilis, and where the mouth is affected, and possibly also the mucous membrane of the penis, the resemblance is heightened. The itching, the evolution of the disease, and the negative Wassermann reaction, should serve to distinguish between the two diseases.

Acute Lichen Planus appears abruptly in the form of a more or less generalised erythema, within which tiny papules can be recognised.



Fig. 20. Lichen planus annularis



Fig. 21. Lichen planus circinatus



Fig. 22. Lichen planus mucosae oris



Fig. 23. Striae (distensae)

As the erythema fades, more characteristic lesions appear. The degree of itching is variable.

In *Atrophic Lichen Planus* (Fig. 19) the central area becomes cicatricial, resulting in round white patches bearing a resemblance to morphœa.

Hypertrophic Lichen Planus is most often met with on the legs in the form of warty patches (*lichen planus verrucosus*) of varying and sometimes considerable dimensions, with a rough, pitted, scaly surface. Darier has observed this eruptive form developing on eczematous foci, and believes it may occur in other conditions besides lichen planus.

Lichen Obtusus is considered by many to belong to the prurigo group. The elements in the form of red or brown hemispherical lesions, about the size of a split pea, are met with on the front of the legs.

Lichen Planus Annularis (Figs. 20 and 21).—The lesions are grouped in the form of rings, usually with central pigmentation. If two or more of these rings coalesce, a serpiginous figure results. Another form of lichen planus is occasionally seen where the eruption develops in a line or band, along a limb or across the body, bearing a close resemblance to the linear nævus (*lichen planus linearis*).

Lichenification denotes certain peculiar changes in the skin resulting from itching, rubbing, and scratching. In the primary form, one or more patches of small or considerable dimensions appear upon apparently healthy skin. These patches, in their fully-developed form, have the following aspect: the margins are diffuse, but in the central region the skin is thickened and usually darkened; the natural lines are exaggerated, dividing the skin into a series of angular or polygonal papule-like bodies resembling the elements of true lichen planus. A moderate degree of desquamation is not uncommon. The eruption is most commonly seen on the nape of the neck, the inner surface of the thighs, the forearms, or elsewhere. One or more patches may be present. In certain skin diseases, such as eczema, psoriasis, and seborrhœic dermatitis, secondary lichenisation may be observed as a result of scratching. The patches are similarly formed, but are generally smaller, and are intimately associated with the causal dermatosis.

Treatment

In the general treatment, arsenic or mercury are usually prescribed. The former is best given by the mouth in liquid form in increasing doses. The administration should not be continued over too prolonged a period, otherwise arsenical pigmentation of the skin and keratosis of the palms and soles may result, a possibility to be remembered in the

treatment of any chronic disease with arsenic. In acute lichen planus arsenic has proved an unsuitable remedy. Mercury is conveniently administered as gray powder (gr. i., or more) thrice daily after food. Care should be taken to avoid mercurial stomatitis or diarrhoea. In those cases where itching is a considerable feature, phenazone, prescribed in large doses up to grs. x. thrice daily, affords relief. A similar result is obtained by lumbar puncture. The local treatment includes sedative baths containing $\frac{1}{2}$ ounce of cyllin, or bicarbonate of soda 4 ounces. The following application is often found useful: liquor picis carbonis, ℥x.; liquor plumbi subacetatis, ℥x.; water to an ounce. Ointments containing salicylic acid grs. x. to the ounce, or ammoniated mercury, or carbolic acid may be employed, or the following modification of Unna's ointment: perchloride of mercury, grs. ii.; carbolic acid, grs. xx.; ung. zinci, an ounce. These preparations sometimes prove irritating, and should be used with caution, particularly the latter. The resistant patches and the hypertrophic forms of the disease are best treated by X-rays. The patient's general health should receive attention. Complete rest in bed may be necessary in the acute phases of the eruption.

Pityriasis Rubra Pilaris (Plate 13, Fig. 25)

In this disease, a remarkably rare one, the eruption appears on different parts of the body in different forms. The characteristic element, a follicular papule, is seen on the backs of the hands and fingers (Fig. 25), but also occurs on the body and neck. The papules vary in colour from pink to brown, and exhibit a central horny plug occupying the mouth of the follicle. On the fingers these little horny masses assume a black colour. There is considerable scaling on the scalp, and a similar desquamation, with redness, on the face; some degree of ectropion may occur. Patches are met with on the elbows and knees, remarkably like the eruption of psoriasis; the palms and soles are rough and thickened. In some cases a general erythema, with exfoliation, occurs during the course of the disease. The eruption may persist for a considerable period, but recovery is the rule, although relapses are not uncommon. The general health is little affected, and itching is a variable factor. Diagnosis is made by the discovery of the typical follicular papules on the backs of the hands and the fingers, where the black, conical plugs afford a clue to the nature of the disease. Various methods of treatment have been recommended, such as thyroid, arsenic, pilocarpine, and tuberculin. Local applications, including salicylic acid and resorcin, assist in removing the scales; this process is further assisted by the free use of soap and alkaline baths.



Fig. 24. Lichen ruber verrucosus



Fig. 25. Pityriasis rubra pilaris



Fig. 26. *Verrucae vulgares*



Fig. 27. *Condylomata acuminata* (Venereal warts)

Warts (*Verrucae*) (Plate 14)

These are flat or filiform elevations of the skin composed of hypertrophied epithelium.

Etiology and Pathology

The popular belief that warts are due to some form of infection is supported by experimental inoculation, although the nature of the parasite has not been determined. The essential changes are found in the epidermis, and while varying to some degree in the different clinical types, in all assume the form of an increase in the horny layer with hypertrophy of the rete mucosum.

Diagnosis

Several different types of wart are recognised. The common wart, single or multiple, occurs chiefly on exposed surfaces, especially the hands, as a solid raised, round body with, in its fully-developed form, a flat, rough, discoloured surface. Plane or juvenile warts are, as the name implies, especially met with in children; they occur on the hands, face, and elsewhere, in lines or groups, often in considerable numbers, as flat-topped, slightly elevated papules, the size of a pin-head, the colour of the normal skin. In certain parts of the body, such as the scalp or on the genital organs, the lesions may exhibit multiple filiform processes. In the latter situation these warts tend to form considerable masses (Fig. 27) of a pink colour, and have, from their association with infective discharges, been termed venereal warts. Seborrhœic or senile warts, which should perhaps be included in another category—Darier regards them as *nævi* of late development—are met with in middle-aged or elderly people, more commonly on the trunk, but also on the face and hands; usually multiple, they occur as round or oval elevations covered with a greasy, dark brown, or black scale.

Treatment

The treatment of warts by local applications aims at the removal of the lesions without causing scar formation. The wart may be repeatedly painted with a caustic, such as acetic acid or acid nitrate of mercury, until it disappears. In many cases electrolysis will prove successful; a needle attached to the negative pole is inserted beneath the papule in various directions, and a current of 2 m.a. allowed to pass. This method may be used by itself, or as a preliminary to others, especially refrigeration. Curetting is a sure but painful procedure, and has the disadvantage of causing scars in some cases. Refrigeration,

has proved the most satisfactory of all methods. From a cylinder CO₂ snow is obtained in the usual way, and is carefully moulded in the shape of a pencil or stick corresponding in diameter to the size of the wart. This is applied with firm pressure for about one minute. A reaction occurs, culminating in a blister; great care should be taken, by the use of antiseptic dressings, to prevent infection at this stage. In certain cases a second or third application may be required. Where the warts are very numerous, they may be caused to disappear by a full pastille dose of X-rays covering the affected area. X-ray treatment is of special service in the case of the painful form of wart occurring on the sole of the foot. This lesion also responds favourably to radium. When the treatment of seborrhoeic warts is considered advisable, the refrigeration method may be employed. In some cases, excellent results have been obtained by skilful application of the cautery.

Acanthosis Nigricans (Plate 15, Fig. 28)

This very rare disease is distinguished by a symmetrical pigmentation and roughening of the skin—compared to the bark of a tree—in certain defined areas, and by the formation of papillomata and warty growths. The regions especially involved are the flexures of the neck, axillæ, and groins; similar changes may be observed about the nipples, at the umbilicus, and elsewhere. In moist situations, such as the genital and peri-anal regions, the growths tend to form exuberant masses. The warty growths are usually pigmented, even black; or they may be pink or flesh-coloured. Changes are also seen on the palms and soles, where the skin becomes rough and coarse; on the scalp, where the hair is thinned; and in the nails, which become thickened, striated, and brittle. On the mucous membrane of the mouth and vagina papillomata form, but there is no increased pigmentation in these situations. The disease is of a progressive nature, and the prognosis extremely grave, especially in view of the fact that in about two-thirds of the cases an abdominal cancer in some form co-exists. In the event of this complicating circumstance, local treatment can be merely palliative; otherwise, attempts may be made to reduce the growths by X-rays or strong salicylic pastes.

Molluscum Contagiosum (Plate 16, Fig. 30)

A contagious disease where, as the result of inoculation, small hemispherical elevations with a minute central depression appear on the skin.



Fig. 28. *Acanthosis nigricans*



Fig. 30. *Mollusca contagiosa*



Fig. 29. *Onychogryphosis*

The condition affects in particular children of the poorer classes, but is also occasionally seen in private practice. Many of the latter cases, as Macleod and others have pointed out, can be traced to Turkish baths, an observation the writer is able to confirm. The disease is contagious and auto-inoculable. The virus belongs to the group of minute bodies having the property of passing through a Berkefeld filter.

Histopathology

On examining a section, it will be seen that the growth is composed of epidermic lobules separated by fibrous septa, these lobules being directed upwards towards the umbilication on the surface. The special feature of the growth is the peculiar appearance certain of the epidermic cells assume. As the result of a degenerative process, these cells form oval or rounded bodies—the so-called molluscum bodies—resembling coccidia, for which at one time they were mistaken.

Symptoms

In its usual form the lesion is seen as a hemispherical, white or pink body about the size of a small pea. With a lens a tiny central depression or umbilication can easily be detected. The tumours may be few or very numerous; they occur on the face, trunk, genitals, or elsewhere, varying in size from a pin-point to a pea, in accordance with their age and development. The rate of growth is slow, weeks or months passing before the full size is reached. On attaining maturity, they may remain stationary or become secondarily infected, and in consequence resolve. From the central depression a peculiar cheesy material containing large oval cells can be expressed, a feature of some diagnostic value. Reference may be made to the very rare giant form (*molluscum giganteum*) seen on the scalp and groins.

Treatment

In the average case, it is sufficient to slit open each tumour and introduce a probe, capped with wool, previously dipped in tincture of iodine. This manœuvre should so be carried out as to avoid scar formation. Curetting, electrolysis, and the cautery are all efficacious. The larger tumours, and possibly those on the eyelids, may be snipped off with knife or scissors. The results of treatment are extremely satisfactory. It is well to remember that lesions so tiny as to escape notice may develop and cause a fresh outbreak.

Striæ Distensæ (Striæ Atrophicæ) (Plate 12, Fig. 23)

This form of cutaneous atrophy is principally seen on the abdomen of women after child-birth. Similar lesions may also be observed on the buttocks, thighs, and breasts; the male sex is occasionally affected. The atrophic striæ form dead-white, usually depressed, lines of varying length. While the condition is generally regarded as the result of mechanical rupture of the elastic tissue of the skin, this explanation does not account for the appearance of atrophic striæ after typhoid fever.

Onychogryphosis (Plate 16, Fig. 29)

The term onychogryphosis is used to describe a peculiar deformity of the nail, usually of the great toe; there is marked thickening, and a massing of epithelial cells on the nail-bed, the nail becoming curved or twisted, resembling a ram's horn. The condition is often found in association with varicose veins. Treatment consists in softening and trimming the redundant mass, or, in extreme cases, in actual evulsion of the affected nail.

Dermatitis Papillaris Capillitii (Acne Cheloid) (Plate 17, Fig. 32)

This uncommon disease is limited to the male sex, and confined to the nape of the neck. In its earlier stages there are present a number of discrete follicular papules, often becoming pustular, characterised from the first by an unusual degree of induration. By progressive development and confluence of the eruptive elements, a well-marked cheloid-like band or mass is formed. The majority of the pilosebaceous follicles are destroyed, with the result that the surface is devoid of hair, except along the upper or growing border, where the hair persists in the form of small tufts. A certain number of follicles exhibit plugs resembling comedones, and there may be some degree of pustulation. The disease differs substantially from acne and the common cheloid in its histological structure, and in its fully-developed form is easily recognised. Treatment is carried out by the destruction of the affected follicles by the thermo-cautery, and by X-rays, a full pastille dose being given, and repeated after a suitable interval if necessary. At the same time, any purulent foci should be opened and evacuated.



Fig. 31. Pemphigus acutus neonatorum



Fig. 32. Dermatitis papillaris capillitii



Fig. 33. *Pemphigus foliaceus*

Vesicular and Bullous Eruptions

The vesicular and bullous eruptions are distinguished by the presence of circumscribed elevations of the skin, containing a clear or yellowish fluid, which may become cloudy or purulent by invasion of pyococci. A distinction is generally drawn between bullæ and vesicles, the former being of a larger size, and originating from a definite cleavage of the epidermis; for this reason they are unilocular structures. These lesions vary in size from a pin-head to a pea or larger, and constitute the essential element in the eruptions to be described.

Pemphigus

This word, formerly employed in a rather vague and indefinite sense, has now become restricted in its application to a certain group of diseases characterised by an eruption of bullæ, with or without an inflammatory base. The different varieties of pemphigus are described below.

Pemphigus Acutus Neonatorum (Plate 17, Fig. 31)

This represents a form of acute infective bullous dermatitis occurring in infants, and occasionally in older children, in epidemics. There is some difference of opinion as to the exact nature and cause of this unusual disease. By many it is believed to be a variety of bullous impetigo due to streptococcal infection; others attribute the disease to *Staphylococcus aureus*. The relationship of this complaint to Ritter's disease, a somewhat similar epidemic infection of the newly-born with exfoliative dermatitis, is close, if indeed both are not variants of the same causal agency. The condition has to be distinguished from congenital syphilitic pemphigus, where the eruption affects the palms and soles, and where other evidence of syphilis is found in the child and mother. Treatment consists in the application of mild antiseptics and in the use of antiseptic baths.

Pemphigus Foliaceus (Plate 18, Fig. 33)

In this condition flaccid bullæ form over extensive areas of the skin, giving rise to a more or less generalised erythrodermia, with a moist oozing surface covered by wafer-like lamellæ and crusts. The disease may also, in its earlier phases, present the features of true pemphigus, or of dermatitis herpetiformis. In certain cases the raw surfaces become papillomatous. A peculiar foetid odour is given off from the affected skin. In its fully-established form the disease closely resembles a generalised exfoliative dermatitis. The course is prolonged into months or years, death being generally the result of some intercurrent malady. While there is no known specific treatment, the symptoms may be alleviated by antiseptic baths, by dressing with boric or other simple ointments, and by careful nursing and dieting.

Pemphigus Vegetans (Plate 19, Fig. 34)

This disease presents certain features which make its recognition relatively easy. In all the recorded cases the eruption has first been observed on a mucous membrane, such as the mouth, vulva, or nose. Other bullæ, which become infected, rupture, and leave a raw surface form on the cutaneous surface, especially in the region of the groins and axillæ. On certain of the raw surfaces, but particularly in the latter situations, foul papillomatous masses develop, forming by confluence considerable areas. In the malignant form of the disease there is progressive development, fever, and ultimate death. A benign form is also met with where the vegetations are found on the trunk and limbs, and where complete recovery eventually takes place. Little is known of the cause of this rare complaint. Various micro-organisms have been obtained in culture from the bullæ, in especial *Bacillus pyocyaneus*; an eosinophilia of the blood and the fluid in the bullæ is a constant feature. In a case under the author's care some of the lesions gave a pure culture of a streptococcus. Treatment is symptomatic, and includes antiseptic baths and dressings, and the administration of arsenic by the mouth or intravenously.

Dermatitis Herpetiformis (Plates 20 and 21, Figs. 35 and 36)

Although this disease is usually associated with the name of Duhring, the observations of Tilbury Fox, published in 1880, can clearly claim priority by four years. The distinguishing features may be summarised as follows: the eruption is polymorphous, even changing in type in different outbreaks; there are marked subjective sensations in the form



Fig. 34. *Pemphigus vegetans*



Fig. 35. Dermatitis herpetiformis (Duhring)

of itching or pain; the condition is of a chronic nature, continuing for long periods, or reappearing after intervals of freedom; the general health is relatively unaffected.

Etiology and Pathology

The disease has been observed at all ages and in both sexes, but is rare in childhood. The actual cause of the condition is unknown; it has been attributed to toxins, or to some nervous influence. One form of the complaint is definitely associated with pregnancy. The bulla, the characteristic element, results from a complete separation or splitting of the epidermis, or sometimes from confluence of vesicles produced by intercellular oedema. The fluid contents exhibit a marked eosinophilia, and an eosinophilia is also a striking feature of the blood picture.

Symptoms

The eruption is symmetrical and usually widely distributed, affecting in particular the following parts of the body: the forearms, the scapular regions, the chest, the loins, the scalp, and the mucous membrane of the mouth. In certain cases, or in certain phases of the disease, the rash is limited to a few patches on the forearms or elsewhere. The eruption is further distinguished by its multiform character, papules, vesicles, bullæ, and pustules all being met with, of which bullæ and vesicles are the most important and significant. The elements may be scattered over the body, or grouped in a form resembling herpes. Erythematous or even urticarial plaques of varying dimensions are frequently present; these, when confluent, assume considerable areas with a polycyclic contour. On their surface vesicles and bullæ appear, and these erythematous plaques studded with vesicles are of considerable diagnostic value. Different phases of the disease may be characterised by the predominance of different elements. Pigmentation or even scarring are occasional sequences of the eruption.

Diagnosis

The diagnosis is established by the chronic and relapsing nature of the complaint, its distribution, and in particular by the presence of bullæ or vesicles, and the itchy or painful character of the eruption. The discovery of lesions in the mouth is of assistance in many cases. The maintenance of a good general state of health has already been referred to, and although fever and vomiting have been observed, they are rarely present.

A form of dermatitis herpetiformis affecting pregnant women is known under the name of hydroa gestationis. The eruption begins about the tenth week, or may be delayed until after delivery. The prognosis is good, but there is a marked tendency to recurrence at each successive pregnancy.

Treatment

A number of remedies have been employed with varying success in the treatment of this intractable disease. In some cases arsenic definitely controls the eruption, but it must be given in high dosage over considerable periods, with the attendant disadvantages of arsenical pigmentation and keratosis. Other drugs, such as quinine, salicin, and antipyrin, have been used, generally with disappointing results. In two cases under the author's care the eruption completely cleared up following injections of whole blood. Treatment by protein shock therapy also deserves consideration in this disease. The local treatment aims at the prevention and alleviation of infection of the skin, and the relief of itching. Both objects may be achieved by a full bath containing $\frac{1}{2}$ ounce of cyllin. The lesions may be dressed with some simple application such as boric or zinc ointment, or the surface may be dusted with a powder containing zinc oxide, talc, and boric acid. Where infection has occurred, dilute ammoniated mercury ointment may be employed.

Pemphigus Vulgaris (Plate 21, Fig. 37)

True pemphigus is characterised by the formation of bullæ on the skin and mucous membranes. It is an uncommon disease, affecting children even less frequently than adults. The eruption often appears first on the mucous membrane of the mouth, lips, nose, or vulva, or it may originate on the skin of the trunk or limbs. The essential element, a tense bulla of round or oval form, contains at first a clear yellow fluid, which later becomes turbid or purulent from secondary invasion by pyococci. The bullæ generally arise upon apparently normal skin; but when their contents become infected, a red areola develops. There is relatively little itching, a feature of assistance in distinguishing true pemphigus from dermatitis herpetiformis. The bullæ either rupture or desiccate, leaving in their place a raw, moist surface, or a crust. Other occasional changes, such as gangrene, may be met with. Eosinophilia is a general feature of the blister fluid, but not of the blood. The skin exhibits a peculiar and special fragility, and, in consequence, it is possible with the finger to slide off the superficial layer (Nikolsky's sign). The course is essentially chronic and pro-



Fig. 36. Dermatitis herpetiformis (Duhring)



Fig. 37. Pemphigus vulgaris



Fig. 38. *Hydroa vacciniforme*

tracted, extending over months or years, fresh lesions appearing singly or in crops, and while a few cases recover completely, the majority eventually succumb to exhaustion, or to some intercurrent infection or disease.

Diagnosis

The diagnosis is often difficult, especially if the disease is seen in its earlier stages, when the lesions may be limited to the mucous membranes. Dermatitis herpetiformis, often mistaken for true pemphigus, is distinguished by the multiform character of the eruption and the marked subjective sensations. Impetigo contagiosa in the bullous phase bears some slight resemblance to pemphigus, but differs completely in its response to appropriate treatment. Acute febrile pemphigus runs a rapid course, with marked constitutional symptoms, and is generally fatal. The disease is seen in butchers, or others who handle dead animals, the causal organism, a diplococcus (Demme), gaining entrance through a cut or abrasion.

Treatment

Treatment includes attention to the general health, and the administration of quinine, arsenic, or intravenous injections of arsenobenzol. Local treatment, in the form of mild antiseptic applications or simple ointments, lessens the discomfort of the patient. The mouth, when involved, may be swabbed with the solution of peroxide of hydrogen (10 volumes), or boric lotion; a simple mouth-wash should also be used.

Hydroa Vacciniforme (Plate 22, Fig. 38)

In this disease the individual is peculiarly sensitive to sunlight, the sensitisation being probably due to hæmatoporphyrin, a substance present in the urine and blood in many cases. On exposure to a strong light, a vesicular or bullous eruption appears on uncovered parts, such as the ears, face, hands, and arms. The bullæ generally pass through a pustular stage, dry up, and are replaced by scars. Some degree of constitutional disturbance and fever may occur at the onset. Beginning in childhood, the eruption recurs each summer, generally ceasing entirely when adult life is reached. Besides the well-marked bullous form, milder degrees of the affection are recognised, where only papulo-vesicles appear and where there is no scarring. Treatment aims at protecting the skin from the effects of light and heat. The condition is not entirely due to the actinic rays, for in a case under the

writer's care the skin was more profoundly affected by the light and heat of the summer sun than by a powerful ultra-violet light beam. Nevertheless, substances such as yellow vaseline, which have the property of absorbing the actinic rays, are definitely protective.

Herpes Simplex (Plates 23 and 24, Figs. 39, 40, and 41)

In this condition a group of vesicles appears on an erythematous base. Although the eruption may be met with on the trunk, limbs, or pharynx, the face and genital organs are the most commonly affected regions.

Etiology and Pathology

Herpes is found at all ages and in both sexes. Its association with certain infective conditions, such as the common cold, pneumonia, and epidemic cerebro-spinal meningitis, is well known. A traumatic variety has also been described following dental operations. A patient under the writer's care developed an attack of herpes on the buttock after every intramuscular injection of mercury. In many cases there is a marked tendency to recurrence, often in the same position, and although the disease is not contagious, the fluid from the vesicles will produce severe keratitis, sometimes followed by encephalitis, when inoculated into the rabbit's cornea.

Symptoms

The eruption is preceded by local sensations of pain, burning, or itching, or sometimes by general disturbance in the form of fever or shivering. There then appear on the face or elsewhere one or more erythematous patches, upon which a number of clear vesicles rapidly form. The affection lasts from a week to ten days, the vesicles becoming cloudy, rarely purulent, drying up and leaving a red patch. No scarring results. The eruption is common on the face (herpes facialis), especially on the lips, the lower in particular (herpes labialis, Fig. 39); the genital organs are also frequently affected (herpes pro-genitalis, Figs. 40 and 41).

Diagnosis

The diagnosis of herpes on the face or lip rarely presents difficulties. In the male, herpes progenitalis rapidly assumes the form of an erosion, and may be mistaken for a primary syphilitic sore, especially where induration has been brought about by mercurial applications. The herpetic lesion has a polycyclic contour, and unless cauterised or treated



Fig. 39. Herpes labialis



Fig. 40. Herpes progenitalis



Fig. 41. Herpes progenitalis



Fig. 42. Herpes zoster gangraenosus

with mercury is not indurated; the *Spirochaeta pallida* is not found. Herpes simplex of the pharynx, buccal mucous membrane, conjunctiva, and the relapsing form on the hand, are recognised if the possibility of their occurrence be borne in mind.

Treatment

The eruption on the face or lip can often be aborted by the application of spirit when the warning signs are experienced. When the eruption has appeared, calamine lotion or a powder is employed; or if there be secondary infection, weak ammoniated mercury ointment. Herpes of the genital regions demands remedies of the simplest and least irritating character, such as boric lotion, zinc or talc dusting powder, or calamine lotion. Resistant lesions may be touched with silver nitrate solution (2 per cent.), provided syphilis has first been excluded. In the recurrent form, the attacks can often be prevented and the condition cured by small doses of X-rays to the affected region.

Herpes Zoster (Plates 24 and 25, Figs. 42 and 43)

Herpes zoster, shingles, and zona are names applied to an eruption on the skin of round or oval erythematous patches upon which vesicles appear. The eruption is commonly unilateral, with a segmental distribution.

Etiology and Pathology

The disease is observed at all ages; it appears to be more common in spring and autumn, and what seem to be small epidemics have been noted. Those in contact with herpes zoster occasionally develop varicella, suggesting some relationship between the two diseases. An attack of varicella in childhood does not, however, protect the adult from herpes zoster. Certain diseases of the nervous system, general paralysis of the insane in particular, predispose to herpes zoster, and there is also a peculiar liability among those taking arsenic. The researches of Head and Campbell have shown that an inflammatory change or hæmorrhage in a posterior root ganglion determines the distribution of the eruption on the skin, and in this way they demonstrated that particular areas corresponding to a particular ganglion could be mapped out on the skin. The vesicles form in the epidermis, where a peculiar degeneration and swelling of the prickle cells, termed ballooning, occurs.

Diagnosis

The eruption is preceded by pain and enlargement of the neighbouring lymphatic glands, and sometimes by such general symptoms as fever, rigors, and malaise. These may suggest pleurisy or pneumonia, an impression that is corrected by the appearance later of the characteristic vesicular lesions, often in successive patches. The vesicles, at first clear and then cloudy, are occasionally purulent or hæmorrhagic, and in rare cases the affected areas become gangrenous. Scarring is not an unusual sequel. The pain varies in degree, and may be of considerable severity, sometimes continuing long after the active phase has ceased. When the ophthalmic division of the fifth nerve is involved, the eye may be seriously affected. The disease usually runs its course in a week or ten days, the vesicles drying up and forming scabs. The most striking feature is the unilateral distribution of the eruption, both sides of the body only rarely being involved.

Treatment

This aims at relieving pain and preventing infection. For the former, phenacetin, aspirin, or even hypodermic injections of morphia, may be employed. For the latter, the eruption may be washed over with weak perchloride of mercury lotion, dusted with a powder containing 2 per cent. boric acid, and covered with cotton-wool. Infected lesions, if present, are treated in the usual manner. The relief of the persistent neuralgic pains presents many difficulties. This post-herpetic neuralgia is most intractable, and causes considerable suffering. The various forms of treatment applicable to neuralgia in general may be tried, but are rarely successful. In some cases relief has been obtained by the application of X-rays to the affected region.



Fig. 43. Herpes zoster

Pustular Eruptions

In this group the elements may be pustular from the first or only as the result of a secondary invasion by pyococci. Therefore pustulation, if not the essential character, is a conspicuous feature at some period of the eruptive process.

Folliculitis Barbæ (Plate 26, Fig. 44)

In men the hair of the beard and moustache regions is liable to a chronic staphylococcal infection, sometimes termed sycosis staphylo-*genes*. The essential lesion is a follicular pustule or papulo-pustule. A similar eruption occasionally develops on the pubes and axillæ of both sexes.

Etiology and Pathology

The disease is due to an infection of the hair follicle, generally by the *Staphylococcus aureus*, more rarely *S. albus*. It may be traced to a preceding impetigo or boil, or to a contaminated razor or shaving brush. On the upper lip the eruption is often secondary to disease of, and discharge from, the nose. In many cases the folliculitis is grafted upon a seborrhœic dermatitis, especially in the type involving the pubes and axillæ.

Symptoms

In its fully-developed form the skin of the affected region is red and infiltrated, and covered with numerous follicular pustules and crusts. The diseased hairs can be extracted in their entirety, and come away surrounded by a gelatinous sheath. The whole extent of the hair is involved, which accounts for its easy and complete removal. In many cases papules as well as pustules are observed. The extent of the disease varies, being sometimes limited to a small patch under the lower lip, at other times involving the beard, whisker, and moustache regions, and also the axillæ and pubes. In severe and old-standing cases blepharitis is commonly present.

Differential Diagnosis

Folliculitis barbæ has to be distinguished from ringworm of the beard. This is often impossible without microscopic examination; ringworm is more nodular, and if the moustache region be involved,

ringworm can generally be excluded. In impetigo the primary lesion is a bulla, whereas in sycosis the characteristic element is a follicular pustule. Certain forms of seborrhœic eczema closely resemble sycosis, and, indeed, in many cases it is upon this condition that the sycosis develops. In acute seborrhœic eczema there is weeping and crusting, with little or no infection of the follicles. When lupus vulgaris attacks the cheeks of the adult male, it may bear some resemblance to sycosis, but is distinguished by the formation of scar tissue and the presence of "apple-jelly" nodules.

Treatment

Sycosis staphylogenes is a remarkably chronic disease and peculiarly resistant to treatment, owing to the depth to which the infection of the hair follicles extends. For this reason antiseptic remedies applied to the skin can have only a limited use, because they are unable to penetrate and destroy the causal organisms in the deepest portion of the follicle. It is thus generally essential to depilate the affected regions with forceps, or preferably with X-rays. X-ray depilation sometimes, but not always, produces admirable results, for when the hair grows again the folliculitis is apt to return. In a series of cases under his care the writer made and used autogenous vaccines, but the results were so uncertain that he is inclined to regard this form of treatment unfavourably. In those cases where there is a history of a preceding seborrhœic dermatitis, local mercurial applications are of value, and their effect may be augmented by small doses of X-rays, for if the seborrhœa is cured, the liability to the secondary folliculitis is considerably diminished. Should the disease on the upper lip result from nasal discharge, the appropriate treatment of the nasal condition is essential.

Erysipelas (Plate 26, Fig. 45)

Erysipelas is an acute inflammation of the skin due to the *Streptococcus pyogenes*. The causal organism gains an entrance through some tiny abrasion, or by way of a cut or ulcer, and can be discovered in the lymphatic spaces, especially at or beyond the spreading edge. After an incubation period of some three to eight days, shivering or even rigors are noted; vomiting may occur. The fever at the onset is high, and persists as long as the eruption advances, terminating by crisis. Facial erysipelas usually begins about the eye or nostril; the affected skin becomes swollen, shiny, and bright red, the eruption extending more rapidly where the skin is lax, more slowly where it is stretched,



Fig. 44. Folliculitis barbae (Sycosis staphylogenes)



Fig. 45. Erysipelas



Fig. 47. Ecthyma gangraenosum



Fig. 46. Anthrax (Pustula maligna)

often involving considerable areas, sometimes the whole face. The edge is sharply demarcated and slightly raised. In severe cases, bullæ tend to develop on the inflamed surface; the neighbouring lymphatic glands are enlarged and tender. The eruption may also be met with on the scalp or extremities, where it presents similar characters. In wandering erysipelas, as the name implies, the rash extends over the body, accompanied by a remittent type of fever. Except in this form, and in young or aged persons, the prognosis is favourable, although relapses and second attacks are relatively common. The marked fever, the constitutional symptoms, and the abrupt raised margin of the eruption distinguish erysipelas from facial eczema.

In the treatment of the disease the usual precautions against infection should be taken, and the patient fed in a manner suitable for a febrile state. Injections of antistreptococci serum may be given. While it is doubtful whether local treatment can prevent the advance of the disease, the discomfort and pain are certainly diminished by such applications as a watery ichthyol lotion (1 in 10), or an occasional fomentation, or lead lotion. Sometimes ointment containing ichthyol or boric acid, or even simple inunctions of vaseline, are found more agreeable. Any complicating circumstance should be treated on general medical principles.

Anthrax (Malignant Pustule) (Plate 27, Fig. 46)

Those working with hides, wool, and the bodies of dead animals are liable to an affection of the hands, neck, and face with the *Bacillus anthracis*. Cases have also been described from contaminated shaving brushes. At the site of inoculation, after an incubation period varying from some hours up to three days, the characteristic lesion appears. This at first assumes the form of a vesicle, later becoming purulent, and finally gangrenous, a black slough resulting. This black slough is surrounded by a ring of vesicles, the affected area becoming markedly reddened and infiltrated. Local pain or itching may be experienced. When general infection occurs, high fever, sweating, and delirium follow, death taking place in two or three days. Spontaneous recovery has been recorded. A diagnosis of anthrax is suggested by the central gangrenous spot with its ring of vesicles. Treatment should be early and thorough, the lesion being freely excised, and Sclavo's serum, in doses of 20 to 40 c.c., injected subcutaneously, and repeated if necessary in twenty-four hours. Favourable results have also followed intravenous injections of neosalvarsan.

Ecthyma Gangrænosum (Plate 27, Fig. 47)

This rare affection is generally observed in debilitated children as a sequel of chicken-pox. The blebs, instead of following their usual course, ulcerate, or a black slough forms, which separates, leaving a small ulcer. The causal microbe is usually a streptococcus, although *B. pyocyaneus* has been found in some cases. The prognosis is grave, a general infection frequently occurring. Treatment consists in local antiseptic measures, such as boric baths and applications of weak perchloride lotion.

Impetigo Contagiosa (Plate 28, Figs. 48 and 49)

Impetigo contagiosa is an acute inflammatory affection of the skin resulting from streptococcal inoculation, and characterised first by bullæ or vesicles, and later by superficial crusts.

Etiology and Pathology

The disease is most commonly observed in hospital practice among children. The eruption is the consequence of invasion of the skin by streptococci, a cleavage of the epidermis producing the characteristic blister, a delicate structure which soon ruptures. Secondary infection with staphylococci results in the characteristic superficial crust. The disease is highly contagious and auto-inoculable. In certain cases the dermis may be involved, this deep or dermic impetigo being termed ecthyma.

Symptoms

In ordinary cases the eruption is limited to the face or hands—that is, the uncovered regions liable to invasion by the causal parasite. The primary lesion is a blister containing a clear fluid. This later becomes purulent, and either ruptures or dries, being replaced by a crust which from its superficial aspect has the appearance of being “stuck on” the skin. If this crust be removed, a smooth red oozing surface is exposed. When the patient is seen, it is often the case that only superficial crusts are present, or a mixture of bullæ and crusts may be observed. In certain circumstances all the lesions may persist in the form of blisters, a variety of the disease termed bullous impetigo. Secondary impetigo may occur on the ear from middle-ear disease, on the scalp from pediculosis, and on the body from scabies. In debilitated subjects the deep or ecthymatous form is encountered, the lesions assuming the aspect of small superficial ulcers or erosions surrounded by an



Fig. 48 and 49. Impetigo contagiosa

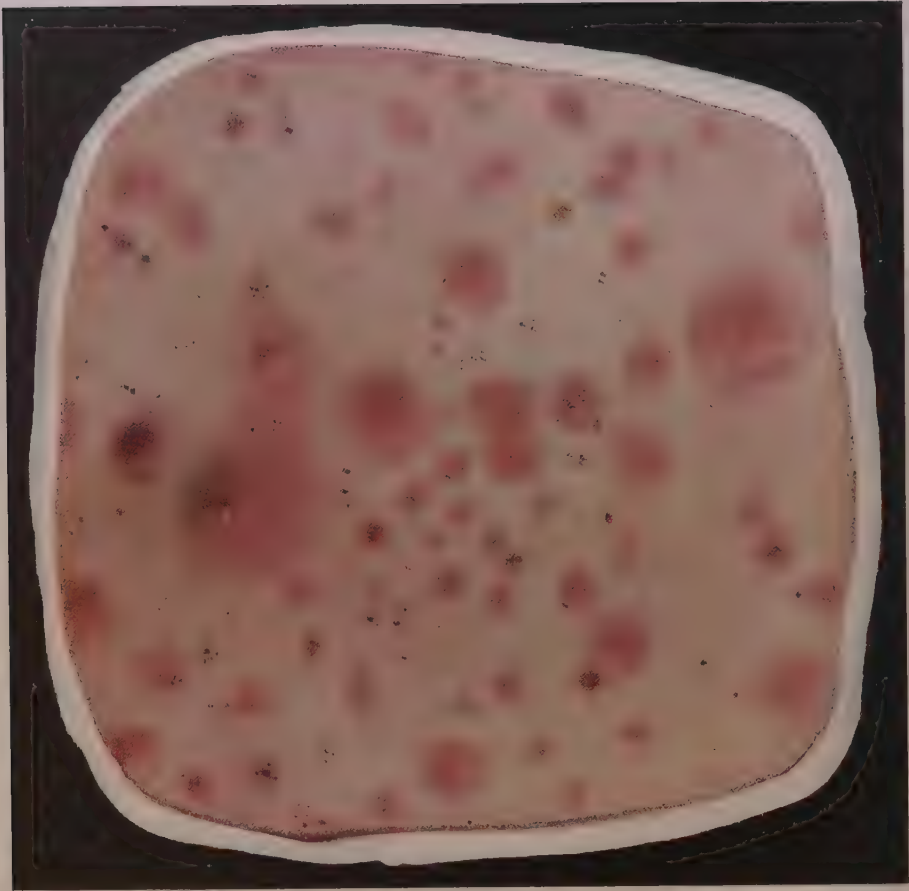


Fig. 50 and 51. Acne vulgaris

erythematous halo and covered with a brown crust or scab, from beneath which pus may be squeezed. Scarring is only met with as a sequel of this ecthymatous form.

Differential Diagnosis

Impetigo has to be distinguished from the impetiginised or infected forms of seborrhœic eczema affecting the scalp, beard, and post-auricular sulcus. These conditions are recognised by their marked symmetry, and by the therapeutic test, for they fail to respond to, or are actually aggravated by, the remedies suitable for the treatment of impetigo. To some of these conditions occurring in the flexures of the arm, groin, or elsewhere, the term intertriginous impetigo is often applied—improperly, in the writer's opinion, because they are not true impetigo contagiosa, but infected forms of seborrhœic eczema, a view that is supported by their response to remedial agents suitable for eczema.

Treatment

The lesions resolve rapidly and satisfactorily when treated with weak antiseptics, such as ammoniated mercury, 5 grains to the ounce of vaseline or zinc ointment. Crusts should be removed by bathing, fomentations, or the boric-starch poultice, otherwise the remedy may fail to reach the offending organisms. Auto-inoculation by scratching or shaving should be guarded against. In the secondary forms, the cure of the impetigo demands the recognition and treatment of the primary condition. In extensive cases a daily antiseptic bath hastens the cure. Ecthyma is treated by removing the crust and pus, cleansing the sores with a weak lotion of perchloride of mercury, and applying ammoniated mercury ointment. Painting the lesions with 2 per cent. silver nitrate solution promotes healing; in ecthyma the patient's general condition will usually demand attention.

Acne Vulgaris (Plate 29, Figs. 50 and 51)

The eruption in this disease generally begins about the period of puberty, and is characterised by a variety of elements—comedones, pustules, and small abscesses; the face, back, and chest are especially affected. Untreated, the condition may persist for years, or disappear spontaneously in early adult life.

Etiology and Pathology

Acne is a relatively common disease affecting both sexes and all classes of society. For its complete evolution two conditions appear to be necessary—an oily seborrhœa, and the presence in the lesions of

certain micro-organisms. Thus the skin of the subjects of acne is greasy, and the orifices of the sebaceous glands unduly prominent, and the skin slightly discoloured and thickened, a condition termed kerosis by Darier. The researches of Sabouraud have shown that from this state the multiform eruption develops. The primary element, the comedo or blackhead, is made up of concentric horny lamellæ, the result of follicular hyperkeratosis, the lamellæ surrounding and enclosing the fatty cylinder in the mouth of the follicle; the black point is due to oxidation of the keratin. A papule is formed by the skin about the comedo becoming reddened and tumefied. Upon the apex of this papule a pustule develops around the comedo. These pustules may be large or small, and from them the pus or blackhead can be expressed by the fingers. In many cases the pustule is divided into two parts, a deep and a superficial, in the shape of an hour-glass. Deep indurated lesions are commonly observed in the more pronounced varieties of the disease in the form of voluminous tender swellings, dark in colour, the size of a pea or bean, with abundant purulent contents. They develop slowly, and upon reaching maturity may rupture or remain unchanged for considerable periods, and often leave in their place scarring or pitting. In the blackhead numerous Gram-positive bacilli are found (*B. acnes*), and with this organism, in the pustules, staphylococci, either of the *S. aureus* or *albus* type, are associated. To these various organisms the suppuration is attributed. The *Demodex folliculorum* sometimes present in the sebaceous orifice is probably an indifferent and accidental parasite.

Diagnosis

The disease is diagnosed by the age of the patient, the greasy skin, the type of eruption, and its distribution on the cheeks, nose, forehead, ears (comedones), shoulders, and chest. The extent of the eruption varies in different cases. The distinctive element is the comedo, but the eruption is characteristically polymorphous. The disease has to be distinguished from the acneiform eruptions observed in workers in tar or chlorine. In certain individuals iodides and bromides produce a spurious acne; the history and the absence of comedones point to the cause. Rosacea affects the central region of the face, is associated with erythema and telangiectasis, and develops later in life.

Treatment

The rational treatment of acne should take into account the causal seborrhœic condition, the comedo, and the secondary infection. Sulphur has a pronounced effect upon many forms of seborrhœic dermatitis,

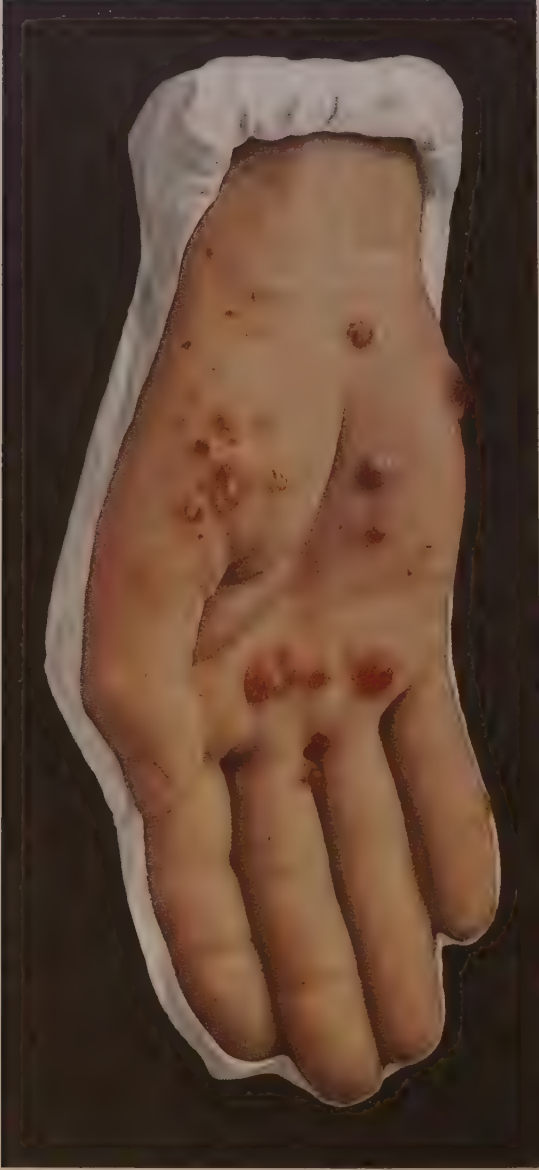


Fig. 52. Dysidrosis

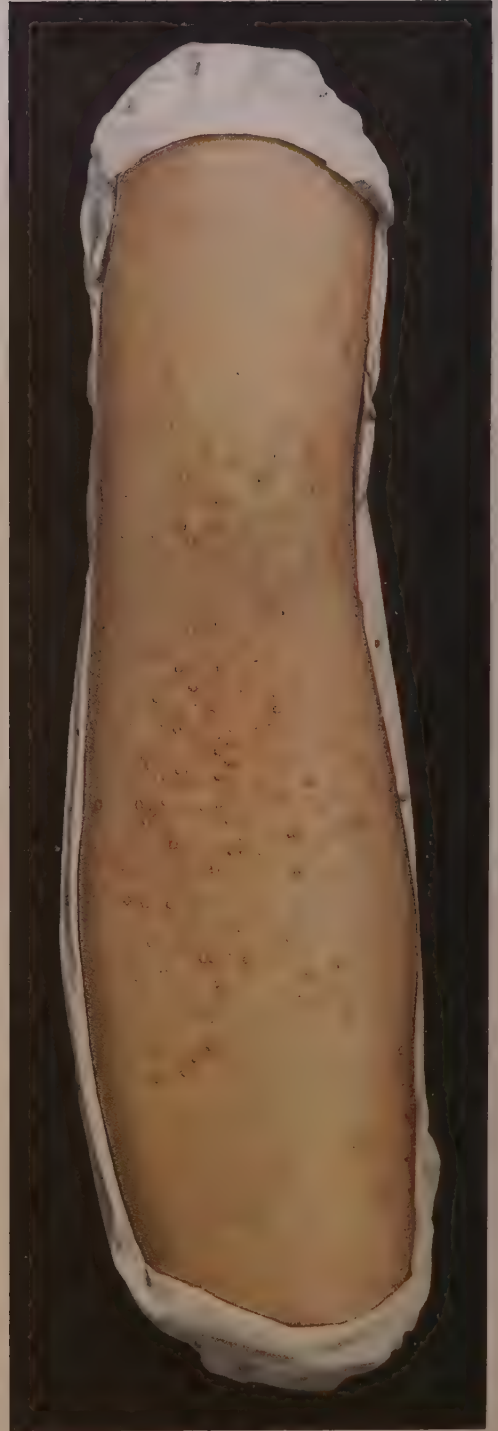


Fig. 53. Miliaria rubra (Sudamina)

and is therefore employed in acne in the form of an ointment containing from 10 to 20 grains to the ounce. Either resorcin or salicylic acid (2 per cent.) may be added with advantage. Calamine lotion, with the addition of 10 grains of precipitated sulphur to every ounce, forms a convenient and satisfactory application. These remedies should be used at first with prudence, for in acne the reactions of the skin differ widely in different individuals, and may be of unexpected severity. Further, applications containing sulphur may, after a time, irritate the skin; if this happens, their use should be discontinued for a short period. The mechanical removal of the comedo is of importance; it has even been said "no comedones, no pustular inflammation." This object is achieved by softening the skin with hot water, and expressing the black-heads with a suitable instrument. The employment of an ether or spirit soap is of assistance in some cases. Great care should be exercised to avoid aggravating the disease by injudicious attempts to extract the comedones. Peeling off the skin by exfoliating applications, such as strong resorcin ointment, is only of temporary benefit. It is often necessary to evacuate the purulent contents of the small abscesses. The lesion is incised, and the cavity washed out with weak carbolic lotion, a hypodermic syringe with a blunted needle being used for this purpose. The effect of X-rays is in most cases remarkable, but only small doses at suitable intervals should be given, to avoid the risk of subsequent radio-dermatitis. Vaccines are indicated in pustular acne. They may be either autogenous or made from a stock culture, mixed, or of *Staphylococcus aureus* alone. It is generally best to begin with small doses, which are gradually increased. Finally, the general health of the patient demands attention, any abnormal condition, particularly anæmia or constipation, calling for suitable treatment. In a certain number of cases benefit has followed the administration of small doses of thyroid, or sulphur, by the mouth.

Dysidrosis (Pompholyx) (Plate 30, Fig. 52)

In this affection deeply-seated vesicles, and occasionally bullæ, appear on the hands or feet, accompanied by sensations of burning or itching. The eruption is especially prevalent during hot weather, and has a marked tendency to annual recurrence.

Symptoms

The eruption is symmetrical, affecting both hands, particularly the sides of the fingers and the palms; occasionally the feet are similarly involved. The characteristic element, a small deeply-seated vesicle,

has been likened to a grain of boiled sago. In most cases the vesicles desiccate without rupture, leaving a red surface with some exfoliation; or they may, on the palms and soles, become confluent, forming bullæ, sometimes of considerable dimensions. There is a pronounced liability to secondary infection by pyococci, with or without an accompanying lymphangitis and adenitis. Some disturbance of the general health may precede or accompany the eruption, and subjective sensations, in the form of itching or burning, are complained of in varying degrees. The eruption comes out in crops, and relapses are common. It was formerly thought that the elements resulted from blocking of the sweat ducts, but histological investigation has shown that the vesicle is formed in exactly the same manner as the eczema vesicle, and this has led many observers to include the disease within the eczema group. In a certain proportion of the cases presenting the features of dysidrosis it is possible to demonstrate a ringworm fungus in the roof of the vesicle or in the squames.

Treatment

The first and essential step in every case of dysidrosis is to exclude ringworm, by careful microscopic examination, and scabies by inspection of those parts of the body affected in that disease. This having been done, the patient's general condition should be improved by exercise, tonics, or in such other directions as may appear necessary. The most suitable local applications are generally those of a simple, non-irritating character—for example, boric acid ointment. The itching is relieved by calamine lotion, with or without the addition of lead; or the hands may be immersed in very hot water, carefully dried, and then gently greased. The patches of dermatitis following the drying up of the vesicles are best treated by zinc ointment containing 5 grains of salicylic acid to the ounce. The infected forms of the disease demand evacuation of the purulent material, and soaking the hands or feet in warm boracic lotion; boric-starch poultices or fomentations are of service in many cases, the latter in particular where there is lymphangitis or adenitis.

Miliaria Rubra (Plate 30, Fig. 53)

This condition, also termed prickly heat, is associated with profuse sweating, and is therefore more commonly met with in the tropics. The eruption is composed of discrete red papules, papulo-vesicles, or clear vesicles, situated at the orifices of the sweat ducts, and is distributed over the back, chest, thighs, and flexures. The onset is usually

abrupt, the rash persisting for several days, then disappearing. There is a marked tendency to relapse and recurrence, so much so that the condition may be constantly present during the hot weather. The violent itching and scratching often occasion secondary pyoderma or eczematization. Treatment includes the suppression of the various exciting causes, such as hot or alcoholic drinks, violent exercise with its attendant sweating, and the avoidance of all stimulating articles of diet. Baths containing bicarbonate of soda are soothing, and simple dusting powders or calamine lotion may be used as local applications. Under the head of miliaria impetigo, Darier has described a similar eruption due to the invasion of the skin by staphylococci. This condition follows profuse sweating, and is frequently, though not invariably, associated with a pre-existing impetigo or furunculosis. Treatment is similar to that outlined above, with, in addition, mild antiseptic baths.

Eczema

The condition termed eczema is one of the commonest affections of the skin. The eruption is multiform in character, including erythema, papulo-vesicles, vesicles, desquamation, crusting, and weeping. In the different types and stages of the disease different elements predominate; thus eczema may be acute or chronic, weeping or squamous, or where secondary changes have occurred, infected (impetiginised) or lichenised. The eruption may also be classified as vesicular, papulo-vesicular, or oedematous, according to the nature of the most pronounced feature; or facial, peri-oral, or of the axillæ or breasts, from its situation on the body. While eczema is not, strictly speaking, a disease, but rather a reaction to a variety of causes, internal and external, the eruption has distinctive qualities, allowing of its recognition and classification.

Pathological Anatomy

The subject under consideration is most conveniently introduced by an account of the microscopic anatomy of the process, because the minute changes in the skin determine the objective phenomena, and they also show in what way the different clinical varieties are connected. The earliest changes occur in the dermis in the form of dilatation of the papillary and subpapillary blood-vessels, with exudation of serum. This results in a congestive erythema seen as redness of the skin, most pronounced in eczema rubrum (Fig. 55). Perivascular cellular infiltrations are also present, but they have not the same practical significance as the other changes. The serous exudation accounts for the swelling observed in certain acute types of the disease, especially the forms affecting the face and genitals. This exudate has further and important effects, for the fluid invades the epidermis, separating the prickle cells and producing the oedematous condition termed spongiosis. At a certain point the pressure of the fluid ruptures the intercellular filaments, the fluid as a result collecting in tiny cavities within the

epidermis. These fluid collections are the vesicles, the most important and characteristic element of the multiform eruption. The vesicles increase in size, or join others, and come to the surface, where they can be recognised by the naked eye or with a lens. The subsequent changes in the vesicles are of different kinds; they may, for example, desiccate, forming a tiny scale, or they may rupture and discharge their contents, as in the moist or weeping forms of eczema. The discharge of serum may be considerable, because the opened vesicles form a passage along which the fluid from the œdematous tissues finds continuous exit. A modification in the process of cornification, called parakeratosis, results in an imperfect transformation of the cells into horny substance; they retain their nuclei and tend to accumulate on the surface in the form of squames. Where secondary infection with pyococci takes place, thick crusts are formed, as in the impetiginised variety of the disease.

Etiology

Eczema occurs at all periods of life, from infancy to advanced age, and is the commonest of all diseases of the skin. The eruption has been attributed to external irritants, to internal causes, to various pathological states such as gout, to disturbances of the nervous system following worry, overwork, or nerve strain, and to toxic substances circulating in the blood-stream. External causes have certainly an effect, but this is rather contributory than causal. Examples of this are frequently observed in the aggravation of the eruption by scratching, especially in infantile eczema, or by exposure to wind or sun, or from soap and water. Even in the case of the artificial eczematoid dermatitis due to chemical or mechanical irritation of the skin it is necessary to presume some underlying predisposing condition, otherwise all persons coming into contact with the harmful substance or substances would be similarly affected. The explanation of the underlying morbid state may be found in the doctrine of sensitisation, which can at least be applied to some forms of the disease, but not to all, if we accept the general view that eczema is not a specific disease due to a single cause. The theory of sensitisation is based upon the experiment of Richet, who in 1902 demonstrated that when an animal is injected with certain proteins it develops a peculiar sensitiveness to subsequent, and often very small, doses of the same agent or antigen. The most convincing examples of this sensitised state, so far as eczematoid eruptions are concerned, are met with in traumatic dermatitis resulting from contact with some external irritant. A washerwoman who for years pursues her avocation without harm suddenly develops an eczematous dermatitis

on the hands and wrists. Afterwards, the least contact with the offending agents reproduces the eruption. The same series of events is not infrequently seen in the professional photographer, from metol or ortol, and in certain persons who have become sensitised to the *Primula obconica* or the American poison ivy (*Rhus toxicodendron*). The application of the theory to the forms of eczema due to internal causes is not so convincing. The abrupt appearance of the eruption suggests the sudden admission into the circulating fluids of a harmful substance, the antigen, derived from various sources, such as ingested food, bacterial foci, or possibly through the agency of the endocrine glands; the antigen coming into contact with the sensitised tissues provokes the characteristic eruption. The well-known case of Fox and Fischer may be cited in this connection, where a man, thirty-five years of age, with chronic eczema of the hands and wrists, was found by the cutaneous tests to be cabbage sensitive. When cabbage was excluded from his diet the eruption cleared up, reappearing when cabbage was again eaten.

Symptoms

The eruption in eczema is markedly symmetrical, affecting both sides of the body, sometimes in a similar fashion, sometimes in different degrees. The onset may be abrupt, as in the acute forms, or chronic from the first; or both phases may be observed in different situations at the same time. The rash is essentially polymorphous, including redness, vesiculation, weeping and scaling, and in certain cases secondary changes, such as impetiginisation from coccal infection and lichenisation from scratching. The redness is the result of the dilatation of the capillary vessels; the vesiculation and weeping depend upon serous exudations into the dermis and epidermis; the desquamation is the sequel to the abnormal process of cornification termed parakeratosis. The results of these phenomena are not of uniform character; they vary in accordance with the intensity of the process, the predominance of some special feature, and the degree of secondary infections. For this reason the eruptive process is best described, not as a single type, but in various forms. These different stages of eczema are translated into a variety of clinical conditions sufficiently well marked to permit of separate description, as in the following representative classes:

Acute Eczema.—In this form several stages may be recognised: first, redness with swelling; then vesiculation and weeping; and, finally, desquamation. The face, external genitals, and forearms are peculiarly

liable to be affected. The pronounced redness sometimes observed merits the term erythematous eczema. Swelling is often a marked feature where the skin is loose, as on the face or genitals. Subjective sensations of itching and burning are complained of, and may be of an almost intolerable nature, and occasionally slight fever and gastric disturbance are noted. The attack is usually of limited duration, the skin resuming its normal aspect in a few weeks; or it may gradually pass into one of the subacute or chronic forms. Secondary infection may occur, with crusting and a certain amount of pus formation. In acute eczema the possibility of some external irritant as a determining factor should be kept in mind. The erythematous variety affecting the face is occasionally mistaken for erysipelas, from which it is distinguished by the high temperature and the marked constitutional disturbance found in the latter disease.

Subacute or Chronic Eczema.—The description of this phase of the disease cannot be embodied in any precise formula. The distribution of the eruption is not uniform; the lesions may be many or few in number. The patches also vary in size and are of an irregular outline, often without sharply demarcated edges. The red colour is less pronounced than in the acute form, and even perceptible vesicles may be entirely absent. In their place tiny red points, or pits, are often seen, from which fluid can sometimes be observed exuding. The degree of scaling varies from thin flakes to a marked degree of hyperkeratosis, met with on the palms and soles (Figs. 61 and 63). The disease is characterised by successive outbursts which prolong its course over weeks or months. Itching is a pronounced feature, the consequent scratching and rubbing resulting in patches of diffuse lichenisation, excoriations, or pyoderma.

A variety of forms of eczema have been specially described and named, such as the following clinical types:

Eczema Folliculare (Fig. 54), where each inflamed follicle stands out as an angry red papule. The skin is soon involved in the process, and the resulting red patches spread at their edges and undergo central resolution. These patches are usually multiple, and are accompanied by intense itching. The eruption affects the extensor aspects of the limbs, a feature which distinguishes it from other kinds of eczema. Follicular eczema, first described by Sir Malcolm Morris, is peculiarly obstinate, and shows a special liability to recurrence.

Eczema Madidans (Rubrum) (Fig. 55) is a term applied to the disease when accompanied by a constant oozing of serum from the inflamed surface. The condition is particularly observed in obese



Fig. 54. Eczema folliculare



Fig. 55. Eczema madidans (rubrum)



Fig. 56. Eczema mammae



Fig. 57. Eczema axillae



Fig. 58. Eczema orbiculare oris

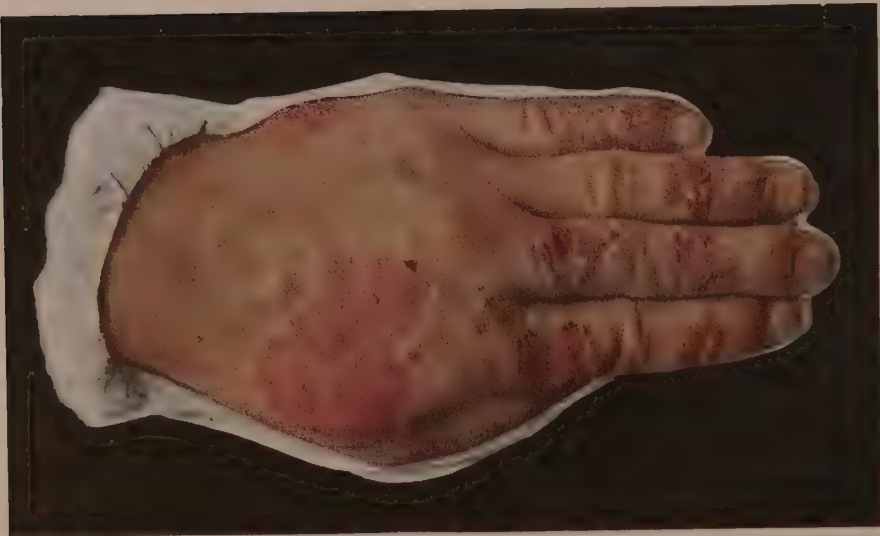


Fig. 59. Eczema e professione

and gouty subjects, and is seen on the arms and legs. The affected area is red, constantly moist, in some cases almost dripping.

Eczema Mammæ (Fig. 56), as the name implies, affects the breasts. The eruption is almost exclusively confined to the female sex, and may be a sequel of scabies, pregnancy, or lactation. It is important to distinguish this condition from Paget's disease of the breast, where an inflammatory eczematoid eruption occurs in the region of the nipple and areola on one side, predisposing to, and usually followed by, malignant disease.

Eczema Axillæ (Fig. 57) represents a variety of the disease either localised to the axillæ or associated with a similar eruption on the pubic region, groins, and flexural aspects of the body. Axillary eczema is remarkably resistant to treatment, and is often complicated by abscesses of the sweat ducts; the frequent association with seborrhœic eczema of the scalp suggests that the condition belongs to the seborrhœic group of disorders.

Eczema Orbiculare Oris (Fig. 58) is usually found as a dry, scaly form of dermatitis about the mouth. It may be associated with chronic streptococcal fissures at the angles of the mouth, and is sometimes, but not invariably, accompanied by scurfy patches on the face. This form of eczema is also regarded by many as a variety of seborrhœic dermatitis, but in some cases it is definitely traumatic, and can be attributed to the irritation of tooth pastes or powders.

Eczema e Professione (Fig. 59).—A number of substances used in different occupations and trades possess the potential quality of producing eczematous eruptions in predisposed individuals. Examples of professional or trade dermatitis are seen in washerwomen and domestic servants from soap and soda, in photographers from metol and various chemicals, in bakers and grocers from sugar or other substances, and in surgeons from antiseptics. The hands, especially the dorsal surfaces, are usually primarily affected, but once the eczematous process has been started, it may spread up the arms and to other regions of the body. The distinction formerly drawn between traumatic dermatitis and eczema is no longer entirely acceptable, because the theory of sensitisation is applicable to both processes. It is true that in many cases of traumatic dermatitis the eruption clears up when the causal irritant is suppressed, but this is equally observed in genuine eczema, as in the cabbage sensitive individual mentioned above. The objective and histological appearances are, broadly speaking, similar, the eruption in trade eczema being vesicular, erythemato-œdematous, or fissured and lichenised. Secondary infection with pyococci is perhaps more common in trade eczema, impetiginisation being a not infrequent complication.

Treatment

Before any general or local method of treatment is adopted, a preliminary survey should be made with the object of discovering any determining or predisposing condition, particularly external irritants. Anæmia, constipation, or dyspepsia, if present, should be corrected. The affected region must be rested as far as possible, and protected from the effects of scratching and rubbing, and soap and water. Individuals with an unstable nervous system suffer in an extreme degree from itching, and for them sedatives, such as chloral, bromides, or phenacetin, are required. Where the eruption is widely distributed or acute, rest in bed is distinctly advantageous. It will often be found that certain articles of food, seemingly or in fact, aggravate the disease, either directly or by increasing the pruritus. Generally the more acute forms of eczema do best on a light milky diet, and in all cases spices, curries and condiments are harmful and should be forbidden. Alcohol is, as a rule, injurious, but there are certain cases where, given in moderate quantities, it promotes sleep and is generally beneficial. The local treatment varies with the stage and form of the eruption. In the acute phases of the disease lotions are indicated, such as calamine lotion, or the following: glycerin of subacetate of lead, 1 ounce; glycerin, 1 ounce; and water to 1 pint (Sequeira). This lotion is applied on lint kept constantly moist. After lotions have been used for some time the skin tends to become dry, and a cream or liniment may be substituted—for example: calamine and zinc oxide, of each 15 grains; lime water, 2 drachms; and olive oil to the ounce. When the eruption has reached a further stage, and in many of the chronic forms of the disease, a paste may be prescribed, such as the well-known Lassar's paste, with or without salicylic acid. Because of the higher proportion of powder, a paste is less "heating" to a congested or slightly moist surface than an ointment. In the final stages, and in chronic eczema, some stimulating form of application is demanded. Pure coal tar may be painted on the surface, provided there is no sepsis, or it may be used in combination with other drugs, as in the following formula: pure coal tar, 1 drachm; zinc oxide and starch, of each 2 drachms; and vaseline and lanoline, each $\frac{1}{2}$ ounce. Sluggish dry patches often prove extremely rebellious; they may be treated by small doses of X-rays, or by a weak chrysarobin preparation. In these cases the following ointment may be tried cautiously: liquor picis carbonis, 30 minims; ammoniated mercury, 10 grains; vaseline, 1 ounce. Deep fissuring and crusting are common complications of eczema. Painful fissures should be painted daily with silver nitrate (10 to 20 grains to the ounce of sweet spirits of nitre). The



Fig. 60. Eczema chronicum squamosum



Fig. 61. Eczema chronicum volae manus corneum



Fig. 62. Eczema chronicum volae manus corneum



Fig. 63. Eczema corneum plantae pedis

removal of crusts, an essential preliminary, especially in the infected forms of the disease, is best accomplished by the boric-starch poultice, or may be effected by softening the crusts with olive oil. While it is not now generally admitted that eczema is a bacterial disease, it is a fact that in a proportion of cases benefit is derived from vaccines made either from the micro-organisms contaminating the local lesions or from the intestinal flora. In such circumstances the improvement may be attributed either to a specific action of the vaccine or to the injection of a foreign protein.

In traumatic or trade eczema, it is of first importance to remove the affected individual from contact with the causal irritant; the local treatment is carried out on the usual general lines. It may be possible to free the patient of his special susceptibility to the harmful substance by desensitising methods, such as auto-hæmotherapy or auto-serotherapy.

Infantile Eczema

Eczema in infants is observed during the first two years of life, particularly from the second to the eighth month. The eruption commonly begins on the face, affecting especially the cheeks and forehead, but may also involve the scalp, arms, and legs, or become more or less universal. The disease is characterised first by ill-defined erythematous areas, and later by vesiculation and weeping; secondary infection and crusting are not uncommon. Itching is a pronounced feature, and the child's attempts to obtain relief by rubbing aggravate the complaint and prolong its course. The disease may follow impetigo, or the greasy condition of the scalp termed *crusta lactea* (Fig. 64). Improper diet, auto-intoxication, and the effects of dentition are all possible or contributory factors, and in a certain proportion of cases the rash may be a manifestation of protein sensitisation. The prognosis is as a rule good; the eruption rarely persists, even in its more severe forms, beyond the second year of life. In exceptional circumstances the rash becomes more or less permanent, secondary lichenisation occurring, especially on the face and limbs.

Treatment

It is of the highest importance to prevent or limit scratching and rubbing by some form of mechanical restraint, such as light splints of corrugated paper applied to the arms, or by pinning the sleeves to the bed. A suitable linen cap or mask protects the head and face. The local treatment varies with the stage and form of the disease, and is similar to that employed in eczema generally. As a rule, the more simple

remedies are best tolerated. In many cases purified coal tar (a drachm) in zinc paste (an ounce) acts rapidly and effectively. Where there is marked crusting, or where the eruption has become secondarily infected, the boric-starch poultice is used. In other cases the crusts and discharge may be removed with almond oil, the parts being then gently bathed with warm water; in these circumstances the general rule that water should not come into contact with the inflamed skin is broken. While the treatment is in the main external, any obvious error in diet should be corrected, especially as regards excess of carbohydrates or fat. Evidence of this excess may only be obtained by analysis of the stools. Gray powder in small doses may be prescribed in many cases with benefit; where there is any obvious abnormal condition of the bowel, such as diarrhoea or constipation, the usual remedies should be employed.

Eczema Seborrhœicum (Plate 36, Fig. 65).

The term seborrhœic eczema is derived from the older name seborrhœa, signifying in its literal sense a flow of sebum. As the conditions included under this name are not so caused, the term in its original sense is misleading. It is now applied to a group of common eruptions affecting the scalp, presternal and interscapular regions, and also the body. The eruptive elements vary in form from simple pityriasis (dandruff) to the greasy red lesions seen on the chest, or a dry squamous eruption resembling psoriasis.

Pathology

The parasitic theory has been supported by Unna. In his view the disease is caused by the bottle bacillus, a peculiar large coccus-like body resembling in certain forms a yeast. This organism is constantly found in the squames, often in association with *Staphylococcus albus* and the acne bacillus, but has never been cultivated. There are many objections to the complete acceptance of this theory. The more important histological changes consist in an œdema of the dermis with perivascular infiltration, some degree of acanthosis, particularly marked in the psoriasiform types, an abnormal cornification (parakeratosis), and small foci of spongiosis, insufficient in degree to form true vesicles. The particular form which these changes assume differs in the different types, varying with the active or quiet state of the lesion examined. There is thus a distinct resemblance to the microscopic architecture of eczema. The greasy nature of certain of the lesions has been attributed to an unusual activity of the sebaceous glands, or to



Fig. 65. Eczema seborrhoicum

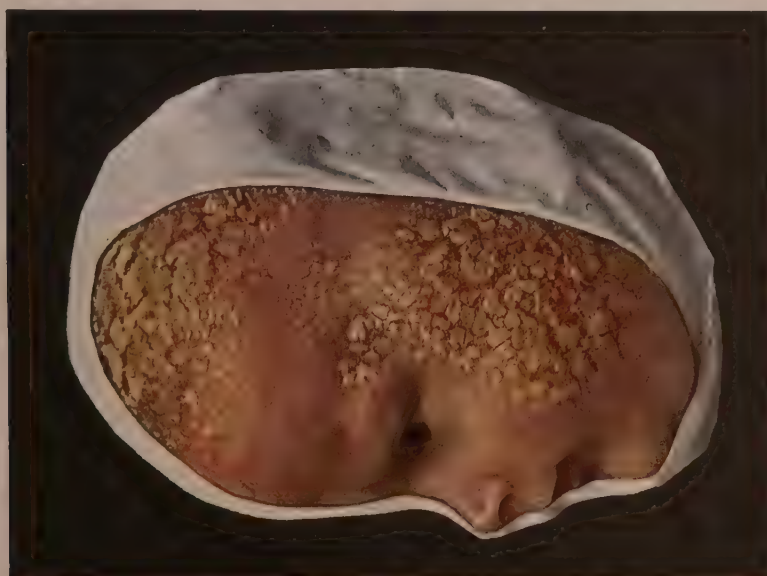


Fig. 64. Eczema chronicum infantum
(Crusta lactea)



Fig. 66. Seborrhoea corporis



Fig. 67. Seborrhoea corporis

an oily substance secreted by the sweat glands. In certain cases, however, treatment of the apparently greasy crusts with osmic acid shows that actually they contain less fatty matter than the normal horny cells.

Symptoms

Seborrhœic eczema or dermatitis manifests itself in a variety of forms, between which there are a number of connecting links showing the relationship of the whole. The features of the disease are best illustrated by considering them in their regional aspects.

Seborrhœa Capitis is observed in its mildest form as pityriasis or dandruff of the scalp. The condition usually begins in childhood, and, once established, is progressive, unless checked by treatment. The scalp, particularly the vertex, at first dry and covered with powdery, easily detached scales, later tends to assume a greasy character. More or less marked shedding of the hair is noticed, and the condition is a common cause of premature baldness in men. At a later stage red patches covered with dry or greasy scales develop, sometimes spreading behind the ears and on to the forehead in the form of a red band (*corona seborrhoica*). Not infrequently the scalp becomes universally affected, the eruption taking on a moist or weeping character, to which the term *eczema seborrhoicum* can accurately be applied (Fig. 65). In the most pronounced form the eruption invades the beard and moustache regions and the ears and cheeks, an extensive weeping and crusted area resulting. Itching may be complained of in all varieties, but it is especially troublesome in the last-named form.

Seborrhœa Corporis (Fig. 66), a term long used to designate a common variety of the disease where the eruption affects the presternal and interscapular regions, in the form of red, scaly lesions, greasy to look at and feel, and oval or round in form. By coalescence areas of considerable dimensions and irregular contour are produced. The individual spots, in spreading outwards, tend to clear up in the centre. The earliest stage appears to be represented by red, follicular papules, and these can often be observed in the neighbourhood of the more pronounced lesions. Colcott Fox was among the first to call attention to the association with this eruption of the dry, red scaly patches in the axillæ and on the limbs. Such observations have led to the view that many, if not all, of the forms of eczema affecting the axillæ, pubic region, and flexures of the arms and legs are moist or weeping forms of seborrhœic dermatitis.

Psoriasiform Type.—In this, the third modification, the elements may bear a close resemblance to psoriasis, both in their clinical and histological features. The eruption, in the form of dry, red areas covered with squames, is either widely spread or limited to one or a few patches (Fig. 67). The distribution and evolution are different from that of psoriasis, and the scale has not the peculiar silver aspect of that disease; on removing the scale, the underlying surface is seen to present minute depressions, and to be moistened with tiny droplets of serum.

Treatment

The treatment of the seborrhoides varies with the region affected, and with the type of eruption. In the mildest form, simple pityriasis of the scalp, regular washing with tar soap may be sufficient. In a further stage of this condition a resorcin lotion should be applied daily. The following is a useful formula: resorcin, 1 drachm; tincture of quillaia, $\frac{1}{2}$ ounce; castor oil, 40 minims; and water to 6 ounces. This lotion may be used where the hair is falling freely. If red patches are present, a pomade is generally preferable, containing either sulphur or the following ingredients: oil of cade, 30 minims; ammoniated mercury, 30 grains; salicylic acid, 10 grains; vaseline and olive oil, of each $\frac{1}{2}$ ounce. In these cases frequent washing of the scalp should not be neglected. The eczematized or weeping forms are treated on the general lines adopted for eczema; it will often be found that an oily application is best tolerated, such as calamine and zinc oxide, of each 15 grains; lime water, 2 drachms; and olive oil to the ounce. The common form of eruption observed on the chest and back responds to a sulphur ointment—for example, precipitated sulphur, 30 grains; salicylic acid, 10 grains; vaseline, 1 ounce.

The psoriasiform eruptions prove peculiarly resistant to treatment; the remedies used for psoriasis may be employed, due regard being paid to the tendency to eczematization characteristic of this form of the disease. In seborrhœic dermatitis affecting the axillæ, applications of X-rays may be required, or the disease in this situation may be treated with a tar ointment of the following nature: pure coal tar (a drachm) in zinc paste (an ounce). While internal remedies have, as a rule, little or no effect on the disease, improvement sometimes follows the administration of sodium thiosulphate, given in 30-grain doses thrice daily for three days, and repeated after a short interval.

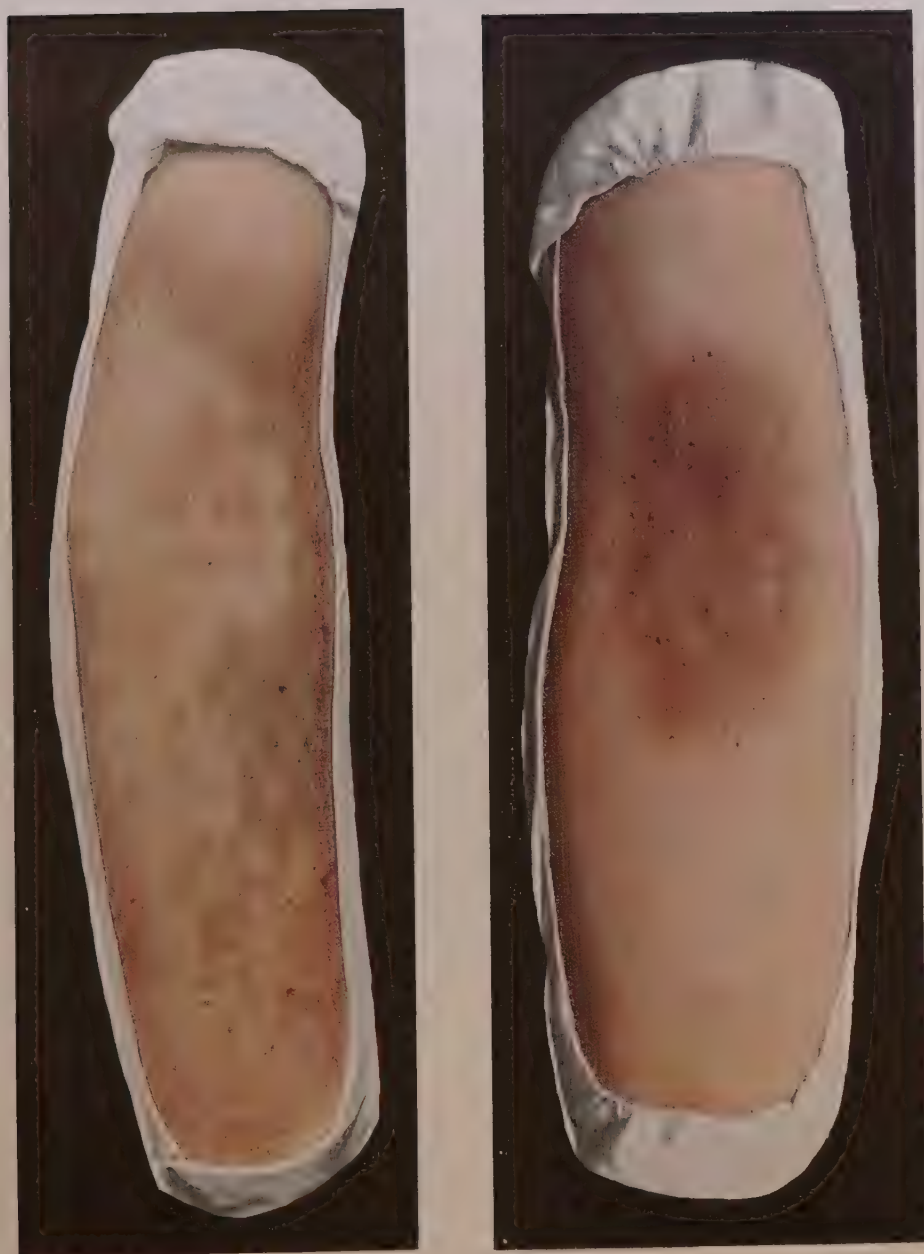


Fig. 68 and 69. Dermatitis lichenoides chronica
(Lichen simplex chronicus [Vidal])



Fig. 70. Dermatitis lichenoides chronica nuchae

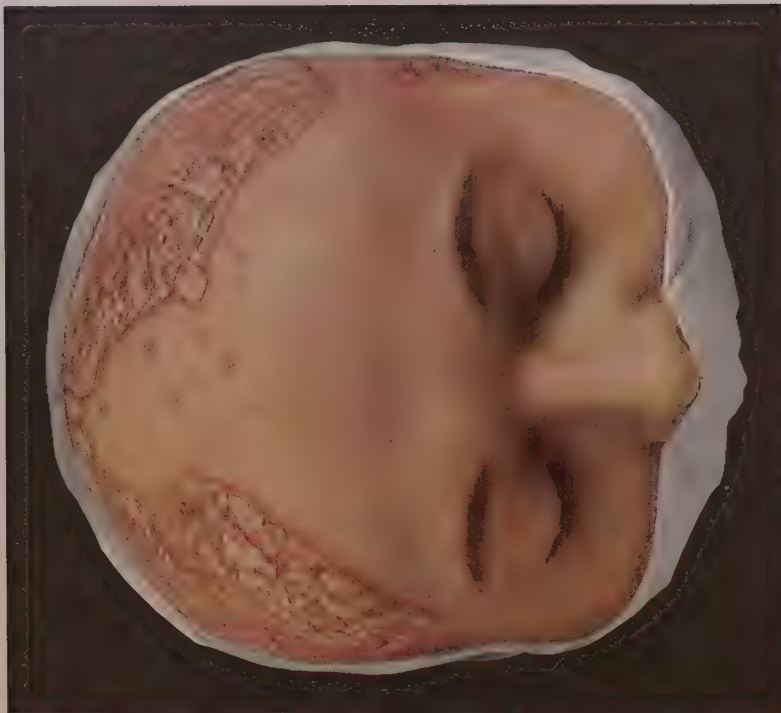


Fig. 71. Psoriasis vulgaris capitis

Dermatitis Lichenoides Chronica (Lichen Simplex Chronicus of Vidal)
(Plates 38 and 39, Figs. 68, 69, and 70)

This condition is especially met with in the following situations: the nape of the neck, the inner surface of the thighs, and the flexures of the arms and legs. It is much more commonly observed in the female sex, and is often regarded as a localised form of prurigo. The eruption presents the features of a circumscribed form of lichenisation, and arises either as the consequence of simple regional itching of the skin, or as a secondary result of some itchy form of dermatosis. Thus the patch on the nape of the neck is not infrequently associated with seborrhœic dermatitis. The actual lesion is oval in outline, infiltrated, and usually pigmented, with a peculiar mosaic-like surface from the exaggeration of the normal lines of the skin. The condition may persist for months or years, new patches often forming in different situations. Treatment aims at preventing scratching, and this is best achieved by a filtered full dose of X-rays, which act in part by relieving itching. Occlusive dressings occasionally prove successful, or the affected area may be painted with pure coal tar.

Erythemato-Squamous Eruptions

This group embraces a number of conditions (such as psoriasis and pityriasis rosea) where the eruptive process is characterised by redness and scaling. Certain of the dermatomycoses may also be included because of the erythemato-squamous aspect of the eruptions on the glabrous skin.

Psoriasis (Plates 39 to 44)

The affection termed psoriasis is characterised by flat, sharply defined, erythemato-squamous lesions, involving in particular the scalp, elbows, and knees. The scale has a peculiar silver aspect, intensified by scratching; its removal exposes a red, smooth surface, upon which bleeding points can easily be produced.

Etiology and Pathology

Psoriasis forms about 7 per cent. of all skin diseases, and is therefore a relatively common affection. Usually first appearing in childhood, the disease may persist throughout life in a series of separate attacks, with free intervals of varying duration. In exceptional cases, the eruption is almost continuously present. A distinct hereditary element is often observed, several members of the family or successive generations being subject to the complaint. Climatic conditions appear to have some influence, for the disease is less prevalent in tropical countries. It has been suggested that psoriasis is a parasitic infection; that it is due to some peculiar toxin circulating in the blood or derived from the intestinal bacteria (Danysz). Samberger attributes the disease to special diminution of vitality of the skin in certain persons. In his opinion, the process of keratinisation is altered, but this alteration, or parakeratotic diathesis, as he terms it, is not apparent in normal circumstances. It betrays itself at once as the result of any trauma or infection, the horny layer then immediately forming scales. Thus the *Staphylococcus pyogenes*, in his view the most common immediate cause of the efflorescence, instead of creating pustules, provokes the special reaction. Other micro-organisms or irritants, he believes, are capable of producing the same result, because the skin always reacts to them, by reason of the diminution in vitality, in the same fashion. The pathological anatomy of psoriasis varies with the type of lesions and stage of the disease. The following features are recognised: there is marked



Fig. 72. Psoriasis vulgaris guttata
et ostracea



Fig. 73. Psoriasis vulgaris



Fig. 74. Psoriasis gyrata et serpiginosa

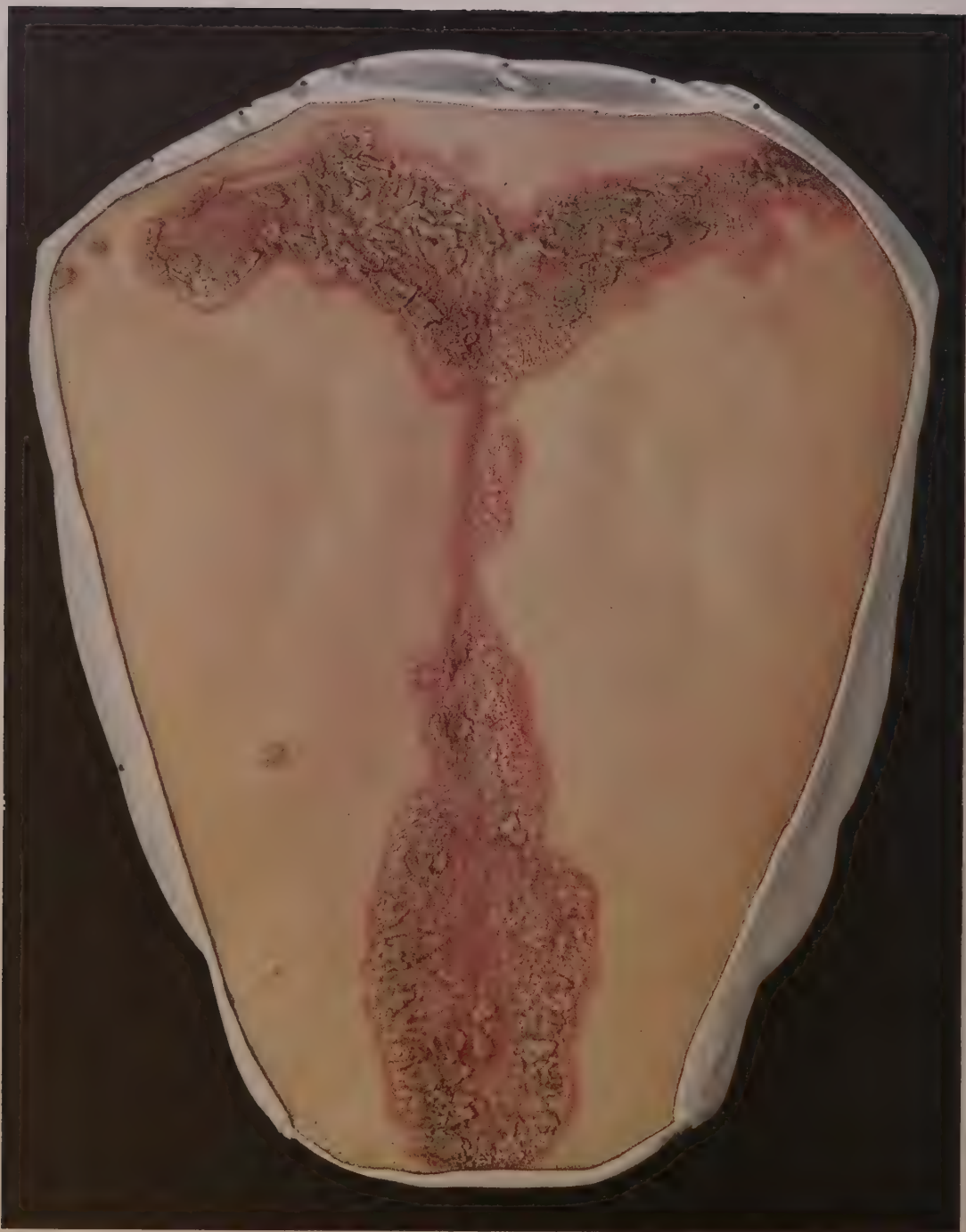


Fig. 75. Psoriasis vulgaris

abnormal cornification (parakeratosis), which accounts for the scaling observed clinically; the papillæ are elongated and finger-like, their summits separated from the surface only by a thin band of the Malpighian layer under the scale, permitting of rupture of the blood-vessels, with bleeding on light curetting. The papillary blood-vessels are dilated with perivascular cellular infiltration, and the papillary and sub-papillary regions of the corium are œdematous. Other changes include the disappearance of the stratum granulosum, and the presence of tiny collections of leucocytes, the amicrobic miliary abscesses of Sabouraud.

Symptoms

In its common form, the lesion of psoriasis is observed as a red spot covered with white or silvery scales. By a methodical examination, certain distinctive features can be demonstrated. If the surface be lightly scraped with a curette, the silvery appearance of the scale is intensified from the admission of air between the layers of the squame. This sign, a valuable one, often assists the observer to come to a correct conclusion. When the scale has been removed, a smooth, red, shining surface is exposed. If the scraping be continued, even gentle manipulation will cause a number of tiny bleeding points to appear. While all the lesions of psoriasis possess these features in common, the elements may be seen on the body in a number of slightly modified forms. The earliest phase is represented by a red point the size of a pin-head with fine scaling, sometimes only becoming evident on scratching. By gradual extension the typical red, scaly, sharply demarcated patch, the size of a shilling or larger, is produced. The surrounding skin is usually normal, but occasionally a distinct halo of paler colour encircles the lesion. At this point the lesion may remain stationary, or may join with neighbouring elements to form a considerable sheet of disease. The eruption is symmetrical, and may affect any part of the body, but shows a decided preference for the scalp, elbows, knees, and sacrum, to which regions it may be confined. The number of patches present at any one time may be few or many; occasionally the surface of the body is almost entirely covered by the rash. It is rare, however, to find the face or hands involved—that is, the parts of the body exposed to light. The following varieties of the disease are described: An attenuated form of psoriasis is occasionally met with where the lesions are imperfectly developed, and appear as ill-defined, pale red areas, with only a slight degree of scaling, which may be difficult to detect unless the surface is scratched. On the other hand, distinct infiltration may, in exceptional circumstances, be observed, most often in the

gyrate variety; or the more chronic patches may assume a rugose and thickened aspect from secondary lichenisation. The term *psoriasis guttata* is used to describe the smaller drop-like spots, and *psoriasis ostracea* those forms where the scale is heaped up in a manner suggesting an oyster shell (Fig. 72). Sometimes the eruption extends at the periphery and clears up in the centre; lesions of this type, when they encroach one upon the other, form a series of broken circles not unlike a late syphilide (*psoriasis gyrata et serpiginosa*, Fig. 74). In neglected cases, the scales may accumulate in dense yellow or brown masses (*psoriasis rupioides*, Figs. 78 and 80).

On the scalp the eruption of psoriasis takes the form of sharply limited lesions covered thickly with scales; these scales are pierced by the hairs, the latter being firmly attached to the scalp, thus differing from the more easily extracted hairs in the somewhat similar seborrhœic eruptions. The disease may spread on to the forehead, as illustrated in Fig. 71. The mucous membrane of the penis or red border of the lip is occasionally affected (Fig. 76), but the so-called psoriasis of the tongue or buccal mucous membrane is a form of leucoplakia, generally of syphilitic origin. The nails are sometimes involved, either alone, which is rare, or in association with the general eruption, which is less uncommon; they become either pitted or thickened, ridged, brittle, and discoloured, with heaped-up scaly matter beneath the free edge (Fig. 77). On the palms a symmetrical eruption may develop in the form of small scaly spots, or in considerable areas with well-marked desquamation (Fig. 79).

The general health of those affected by psoriasis is but little, if at all, disturbed, except in the acutely developing form; indeed, psoriasis has even been described paradoxically as a "disease of healthy people." French writers refer to a special variety of arthropathy peculiar to psoriasis, stated by them to be present in about 5 per cent. of the cases (Darier). Such a condition is certainly less common in Great Britain, and the occasional examples met with have been thought to represent the accidental association of rheumatoid arthritis with a common skin disease. Subjective sensations in the form of itching and burning are occasionally complained of by the patient, but are not characteristic of psoriasis; in these cases the patient itches, rather than the disease.

Diagnosis

The characteristic distribution of the eruption of psoriasis and the special features of the lesion mentioned above are usually sufficient to make diagnosis easy. The seborrhoides, and in particular the psoriasiform type, may present difficulties, but the scale is in general



Fig. 76. Psoriasis vulgaris



Fig. 77. Psoriasis vulgaris unguium



Fig. 78. Psoriasis vulgaris rupioides

more greasy and less silvery, and on removing the scale in seborrhœa, tiny droplets of moisture can often be observed on the denuded surface. Lichen planus is apt to be confused with psoriasis when the eruptive elements coalesce into patches. The colour is different—lilac instead of red—and where Wickham's striæ are present (fine white lines forming a network on the surface of the patch) the diagnosis of lichen planus is assured. Syphilis may be mistaken for psoriasis, both in the secondary and tertiary periods. The secondary papulo-squamous syphilide is often part of a mixed or polymorphous eruption, the papules are distinctly infiltrated to the touch, the distribution is different, and other signs of syphilis are present, such as enlargement of the palpable lymph nodes and lesions of the mucous membrane of the mouth and throat. A positive Wassermann reaction is of assistance in forming a diagnosis. The tertiary serpiginous syphilide bears a close resemblance to the gyrate form of psoriasis (Fig. 74). Tertiary syphilis is distinguished by the infiltrated, even nodular, character of the marginal lesions, by the tendency to central scarring, by the history, and by the presence of other stigmata, such as leucoplakia of the buccal mucous membranes in the male.

Treatment

The treatment of psoriasis aims at the removal of the eruption by external and internal remedies; as we are ignorant of the cause, we cannot cure the disease, using that term in its strict sense, nor are we able in our present state of knowledge to prevent its recurrence. The form of treatment selected depends upon the phase of the disease. When psoriasis develops and progresses in an acute manner, the greatest care should be taken to avoid irritating the skin, or converting the disease into a form of exfoliative dermatitis by the injudicious use of strong applications. In acute psoriasis the patient should be confined to bed, simple applications such as olive oil with 1 to 2 per cent. salicylic acid prescribed, with occasional warm alkaline baths. Salicin may be given by the mouth in 15 to 20 grain doses thrice daily. Under this regimen the eruption will sometimes completely clear up, or it may pass into the subacute or chronic form, when more active topical remedies can be employed. In chronic psoriasis the removal of the scales is an essential preliminary to treatment. This object can be achieved by an alkaline bath made by dissolving 4 ounces of bicarbonate of soda in 30 gallons of water. Half an ounce of cyllin may with advantage be added, and care should be taken to see this is thoroughly mixed before the patient enters the bath, where he remains for twenty minutes,

and by friction with soap removes as much of the scale as possible. The local application, generally in the form of an ointment, is then well rubbed into the patches. A number of different drugs, singly or in combination, are in common use; it is a good general rule to begin with the milder strength, increased later in accordance with the patient's tolerance. The most rapid and most efficient local application is chrysarobin, but this reducing agent has certain objectionable features: the skin is temporarily discoloured, and the linen permanently stained. Further, it possesses decidedly irritating qualities, and even when judiciously applied, is apt to occasion acute dermatitis of the thin skin of the flexures, scrotum, and other parts. It cannot be used on the scalp because it discolours the hair, and if it get into the eyes conjunctivitis results. When chrysarobin is used, the patient should be seen at short intervals, or even confined to bed. The following formula represents a useful combination: chrysarobin, 10 to 40 grains; ichthyol, 15 grains; salicylic acid, 10 grains; vaseline and lanoline, of each $\frac{1}{2}$ ounce. Chrysarobin acts by inducing an erythema, which "cures" the psoriasis, but some experience is needed to judge when the exact end-point has been reached; it should only be employed in the more chronic forms of the disease. The tar preparations stand next in importance, and are probably the most satisfactory for routine treatment. Oil of cade may be combined in doses of 20 minims to 1 drachm, with salicylic acid, 10 grains, in vaseline and lanoline, of each $\frac{1}{2}$ ounce. To this ammoniated mercury, 10 grains, may be added if the eruptions be not extensive. Anthrasol, a colourless tar, is sometimes preferred (1 drachm to the ounce of unguentum petrolei). A small number of patients respond to sulphur, either in an ointment or in the form of a sulphur bath, but care should be taken to avoid sulphur dermatitis. The treatment of psoriasis of the scalp presents difficulties largely on account of the hair. The scales should be removed with, for example, spirit soap, and then a resorcin ointment, 30 grains to the ounce, applied. Alternatively, oil of cade, with ammoniated mercury, may be employed. The face is less tolerant than the body and scalp, and is generally best treated with a mild tar and ammoniated mercury ointment, or salicylic acid or resorcin, 10 grains to the ounce. Two other methods of treatment may be mentioned. X-rays are useful for limited forms of the disease on the elbows and knees and elsewhere, but if this method of treatment be decided upon, the greatest care should be taken to avoid immediate or remote radio-dermatitis. Small doses, such as half a pastille, often completely clear up the eruption, and the operator may be tempted to repeat the exposure at too short an interval, or too often. The ultra-violet light



Fig. 79. Psoriasis vulgaris



Fig. 80. Psoriasis vulgaris rupioides

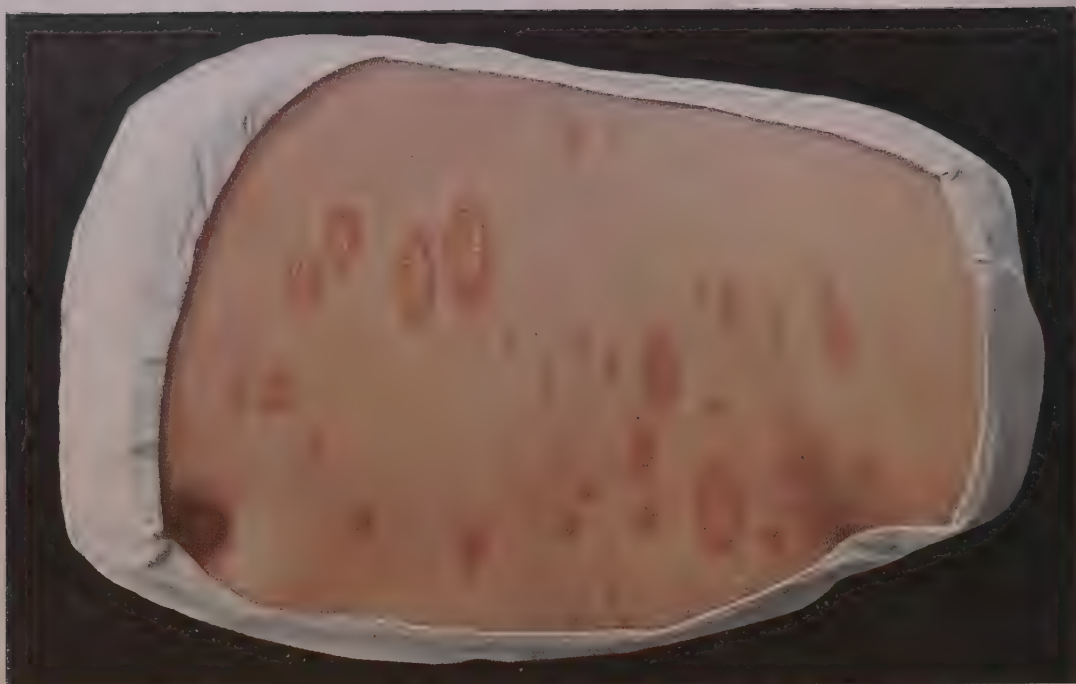


Fig. 82. Pityriasis rosea



Fig. 81. Erythrasma

bath will sometimes completely remove the eruption, a cleanly method which relieves the patient of the disagreeable task of applying messy ointments. Internal treatment is of less value than external. Arsenic given in chronic psoriasis has achieved a reputation perhaps disproportionate to its merits, but may be prescribed in the form of Fowler's solution thrice daily after meals. Patients sometimes continue to take arsenic for months, or even years, with, in consequence, arsenical pigmentation and hyperkeratosis of the palms and soles. Potassium iodide in large doses, as recommended by Haslund, may definitely influence the disease, or the local treatment may be augmented by small doses of carbolic acid or turpentine by the mouth. Intramuscular injections of mercurial preparations or colloidal sulphur have occasionally been successful, and in certain cases Danysz's entero-vaccine appears to be followed by benefit.

Erythrasma (Plate 45, Fig. 81)

This rare mycotic affection is due to a tiny fungus, the *Microsporon minutissimum*, only visible with difficulty in potash preparations with an oil immersion lens. The eruption occurs in the groins, and also occasionally in the axillæ and under the breasts, in the form of reddish or brown patches with a slight degree of desquamation. The disease is rare in females and unknown in infants, and may be accompanied with some degree of itching. Diagnosis is made by the objective characters above described, and is confirmed by the discovery in the scales, soaked in liquor potassæ or stained with borax methylene blue, of the causal organism. The disease is somewhat resistant to treatment, which takes the form of parasiticide applications, such as permanganate of potash, 1 in 1,000, or benzoic acid and salicylic acid, of each 15 grains, in vaseline an ounce. Tincture of iodine may also be used, but is apt to irritate the thin skin of the affected regions.

Pityriasis Rosea (Plate 45, Fig. 82)

Pityriasis rosea, not uncommonly observed in dermatological practice, is chiefly of importance because it may be mistaken for other complaints, especially syphilis and psoriasis. The eruption often, but not invariably, begins with a single oval element, the herald or mother patch, situated on the neck, trunk, or elsewhere. This initial lesion is flat, pink, and slightly scaly, and bears a close resemblance to ringworm. After an interval varying from four to ten or more days, other elements burst out on the body, affecting the "vest area"—that is, the trunk and upper arms and thighs. The lesions vary in size from a pin-head to

oval areas the size of a shilling or larger in their fully developed form. In the latter stage the distinctive features of the eruption can usually be observed. The margin of the patch is rose-coloured and the centre darker; just within the margin the characteristic scale can be seen as a sort of frill, attached at its outer edge and free towards the centre. Light scratching brings up this scale where it is not otherwise easily observed. In rare cases the eruption may be distinctly urticarial, and then itches in a marked degree. The eruption persists, new elements appearing and the older fading, during a period varying from four to eight weeks, or even longer, and then either disappears completely, or leaves a slight temporary pigmentation.

Diagnosis

Pityriasis rosea has to be distinguished from ringworm, from secondary syphilis, and from psoriasis. Ringworm is easily excluded by microscopic examination of the scales and the absence of the distinctive fungus. The roseola of syphilis is never squamous, and other signs of syphilis are wanting. It should here be mentioned that definite enlargement of the palpable lymphatic glands has occasionally been noticed in pityriasis rosea. In psoriasis the distribution of the eruption and its evolution are different, and the squame is silvery and stratified.

Treatment

As the eruption disappears spontaneously, treatment may be considered unnecessary, and the disease may even be aggravated by strong ointments or sulphur baths. On the other hand, simple applications, such as weak salicylic ointment, or baths containing $\frac{1}{2}$ ounce of cyllin, appear definitely to shorten the course. Where the itching is severe, relief may be obtained from calamine lotion, or bicarbonate of soda 1 drachm, with glycerin 1 drachm in water 6 ounces.

Favus (Plate 46, Figs. 83 and 84)

Favus is a parasitic disorder of the hairy scalp, glabrous skin, and nails, due to a mould fungus, the commonest variety of which is the *Achorion schönleini*. On the scalp the earliest phase is represented by red, slightly scaly patches, but when the patient first comes under observation, the typical scutula are usually present, either in the form of tiny sulphur-coloured, cup-shaped discs, pierced by a hair (Fig. 83), or larger yellow cups the size of the nail of the little finger, their peculiar form, according to Unna, being due to the more rapid peripheral growth of the fungus. The scalp exhales a distinctive mousy odour. The eruption may become confluent, resulting in considerable areas covered



Fig. 83. *Favus scutularis*



Fig. 84. *Favus scutularis et herpeticus*



Fig. 85. Pityriasis versicolor

by thick, grayish crusts, or impetiginised, especially where pediculosis is also present. The hair in the regions affected by favus is dull and lustreless, but does not break off, as in ringworm. If one of these hairs be extracted, soaked in liquor potassæ, and examined microscopically, the causal parasite can be identified in the shaft in the form of slender tubes, often dividing dichotomously, with here and there a row of terminal spores; the hair shaft may also contain a number of minute air bubbles. On the removal of one of the scutula, a deep little pit is exposed, involving the dermis, thus accounting for one feature of the disease—viz., scar formation; in old-standing cases cicatricial alopecia is a common sequel of favus. In fragments of the sulphur cups examined microscopically, the mycelial tubes and spores are seen in abundance. On the glabrous skin (Fig. 84) favus occurs either as circinate erythematous-squamous patches resembling ringworm, often presenting well-marked small vesicles or pustules which form tiny scutula, or as the typical cupped discs similar to those seen on the scalp. Diagnosis is made by microscopic examination of scrapings from the lesions. In some of these cases the fungus of mouse favus (*Achorion quinckeanum*) has been identified. The nails, when attacked, become brittle, opaque, and thickened, with heaped-up masses under the free edge; or they may be reduced to friable stumps. A co-existing favus of the scalp suggests the nature of the condition; the diagnosis can be confirmed either by microscopic examination, or by culture of the fungus.

Treatment

The treatment of favus of the scalp by X-ray depilation is similar to that employed in ringworm, but the results are less satisfactory, for the disease often reappears when the new hair grows. As a preliminary measure, all crusts must be removed with weak carbolic oil, and when the hair has fallen, antiseptics should be employed with the object of destroying any remaining fungus. Depilation may also be carried out with forceps, for the diseased hairs come out easily and do not break off. On the glabrous skin, cure can be obtained by soaking off the crusts, and then applying parasiticides, such as tincture of iodine, or ointments containing either chrysarobin, nitrate of mercury, or pyrogallol. The nails, when diseased, should be removed surgically; the raw surface curetted and then treated with antiseptics.

Pityriasis Versicolor (Plate 47, Fig. 85)

A parasitic disease of the skin due to the *Microsporon furfur*, which produces the eruption by invasion of the horny layer. The earlier lesions consist of fawn-coloured spots, and these, by peripheral extension,

grow to the size of a sixpence or larger. Where a number of such lesions coalesce, a considerable sheet of disease results. The outline of the larger elements may be very irregular, the colour varying from a lighter tint to a deep brown, or even black in those who have lived in tropical countries. In the dark races, on the other hand, the eruption has a white appearance. There is a fine, branny desquamation, although this may not be very obvious unless the lesions are scratched with the finger-nail, when the scales can be detached with remarkable ease, a feature of some diagnostic importance. The disease is generally confined to the trunk, but in exceptional cases the upper extremities, and even the face, may be affected; the hands and feet are invariably spared. There are usually no subjective sensations, itching being only very rarely complained of. Pityriasis versicolor is but slightly contagious, and appears to require a special soil for its development. It is more common among those who sweat freely, and is therefore, in particular, met with in persons affected with pulmonary tuberculosis. Although the disease may persist indefinitely if untreated, there is a tendency to spontaneous cure, for the eruption is rarely observed in the old.

Diagnosis

The eruption bears a resemblance to the pigmentary disorders, but can be distinguished by its characteristic scaling. In any case, a certain diagnosis is easily made by the microscope, for the scales contain the parasite in abundance in the form of jointed mycelial threads and groups of round spores.

Treatment

Treatment includes the destruction of the parasite in the skin, and the disinfection of clothing. The former object is accomplished by applying to the affected regions tincture of iodine, or a solution of sulphurous acid, 1 in 4, or thiosulphate of soda, 2 drachms to the ounce of water. Other parasitocides, such as sulphur or naphthol ointment, may be preferred. Previous to these applications the skin should be well washed with soap and water, with the object of removing the scales and fatty matter.



Fig. 86. Chloasma



Fig. 87. Vitiligo

Anomalies of Pigmentation

The normal pigmentation of the skin depends upon the presence of granules of melanin, a substance containing sulphur, but no iron, in the basal layer of the epidermis, and an excess or deficiency of this body is the cause of certain recognised pigmentary disorders. Pigmentation may also be due to the iron-containing blood pigment, hæmosiderin, as in the staining of the lower limbs associated with varicose veins. Excess of pigmentation may result from physical agents, such as sunlight, X-rays and extreme heat, from external irritants, or it may occur in connection with certain pathological states, such as Addison's disease, exophthalmic goitre, and leprosy. The long-continued use of arsenic is often followed by well-marked pigmentation. Two conditions in which an anomaly of pigmentation is the outstanding feature are described below.

Chloasma (Plate 48, Fig. 86)

This eruptive disorder is frequently associated with some abnormal condition of the uterus or ovaries, but may also develop for the first time during pregnancy. The lesions consist of flat discoloured patches, yellow or brown in tint, of round or irregular shape. They have usually a symmetrical distribution, and affect the forehead and cheeks, rarely other parts of the body. Treatment is unsatisfactory, and while in some of the cases appearing during pregnancy the eruption clears up on the re-establishment of menstruation, in the majority the staining remains as a permanent disfigurement. Attempts may be made to remove the lesions with peroxide of hydrogen or exfoliating pastes, but at best the results are only temporary.

Leucoderma, or Vitiligo (Plate 48, Fig. 87)

In contrast to most of the other pigmentary disorders, the striking feature in this condition is the absence of pigmentation in the affected regions. The disease is an acquired one, commonly appearing during adolescence, and while any part of the body may be affected, the patches are more commonly observed on the backs of the hands, forearms,

genital organs, neck, and face. Both sides of the body are usually involved in a roughly symmetrical fashion. The patches begin as small, ivory-white areas, which gradually enlarge, and may, with other similar patches, form into considerable irregular areas with a polycyclic contour. The white areas are sharply demarcated, and are rendered more prominent by the increase of pigment in the skin immediately surrounding them. The hair on the white patches is generally deprived of pigment, and remains or becomes colourless (leucotrichia). The evolution of the disease is slow, but gradually progressive.

Diagnosis usually presents no difficulty, unless considerable areas of the body have become affected. The border of the patch in leucoderma is convex, and even where a number of patches have coalesced, enough of this convex border is left to indicate the abnormal white skin lying within it. In morphoea (circumscribed scleroderma) the tissues are hard to the touch, and in leprosy the patches are anæsthetic, and there are other signs of that disease. The branny desquamations, increase of pigmentation, and presence of the characteristic fungus serve to distinguish pityriasis versicolor.

The majority of cases are entirely uninfluenced by treatment. Improvement has occasionally been observed after the application of a solution of perchloride of mercury, 1 in 1,000, or attempts may be made to pigment the white skin by ultra-violet light. In most cases all that can be done is to disguise the disfigurement by cosmetic applications, such as weak permanganate of potash solution, or silver nitrate solution.



Fig. 88. Tinea circinata



Fig. 89. Tinea circinata

Ringworm

Ringworm is due to the invasion of the glabrous skin, hair, and nails by certain pathogenic hyphomycetes or mould fungi, the conditions resulting from this invasion differing widely in appearance in accordance with the variety of fungus present and the part of the body affected. Ringworm is not exclusively a disease of man; it occurs also in the lower animals, such as the horse, dog, and cat, and also in cattle. Certain fungi affect man only; others may be communicated to man from animals. In extemporary preparations made by soaking the affected squames, hairs, or nail substance in liquor potassæ, the fungus can be seen under the microscope in the form of jointed mycelial threads, or as small round elements, the so-called spores. In the hair, where they are specially developed, the spores were noted by the earlier observers to be large or small in size; from this observation the two great groups of large- and small-spored ringworm were made, each with certain recognisable clinical features. It is now customary to classify the fungi as microsporons (small-spored) and trichophytons, since the latter include certain forms where the spores are as small as, or even smaller than, those of the microspora. Eleven different varieties of microsporons have been distinguished by culture on Sabouraud's proof medium. Of these, the *Microsporon audouini* is of special importance, because it is responsible for most of the scalp ringworm met with in this country. It has the further peculiarity of affecting only the human subject. The trichophytons are subdivided into an endothrix and an ecto-endothrix group; in the former the spores lie entirely within the shaft, in the latter some of the spores are found outside the hair. The trichophytons, apart from the size of the spores, are distinguished from the microsporons by the arrangement of their spores in the hair in regular chains. The ecto-endothrix group comprises a great number of different species, and is the largest of the three; all the varieties of fungi included within it are of animal origin. Ecto-endothrix trichophytons may affect the skin, nails, and hair of the beard or scalp; a marked inflammatory reaction is a striking feature of the group as a whole.

By cultivation on Sabouraud's proof medium the ringworm fungi may be divided into a great number of distinct species, but for practical purposes the classification into two groups, microsporons and trichophytons, is sufficient.

Tinea Circinata (Plates 49, 50, and 54)

Ringworm of the glabrous skin is a comparatively common malady, and is met with in every class of society. The lesions are characteristically oval or round, sometimes irregular, and are distinctly erythemosquamous, and present a vesicular border, which can be recognised under the lens. Sometimes the eruptive elements take the form of concentric circles, or tiny vesicles may cover the patch. The earliest stage of the eruption is represented by a red spot, which rapidly enlarges to assume the oval or round form; the centre may then become squamous, or fade, while the lesion extends at the periphery. The majority of cases are trichophytic, and while any part of the skin may be affected, the uncovered regions are more liable to attack. An uncommon form of inflammatory ringworm is met with on the wrists, forearms, and neck (*trichophytia profunda nuchæ*, Fig. 48), bearing a distinct resemblance to kerion of the scalp, with which it has many affinities. It is often the result of direct infection from an animal, and is therefore met with in grooms, stablemen, and farm hands. The elements may be single or multiple, and are seen, in the situations mentioned above, in the form of boggy inflammatory swellings, dotted over with purulent follicular points, and often covered with a thick crust. The microsporon lesions, which are uncommon, occur on the neck, face, and occasionally on other parts of the body, as small, red macules covered with scales. They are usually secondary to microsporon ringworm of the scalp (Fig. 90).

Diagnosis

The recognition of ringworm of the glabrous skin is usually easy, the typical sharply demarcated ring with its vesicular border being almost unmistakable. Proof of the nature of the lesions is obtained by microscopic examination of the squames and covering of the vesicles. The primary or herald patch in pityriasis rosea is often mistaken for tinea circinata, and in some cases the eruption of seborrhœa may be confusing. Mistake can be avoided by microscopic investigation, which should be carried out in all doubtful cases.

Treatment

As a rule, simple painting with tincture of iodine on several consecutive days is sufficient to cure the disease. Where the eruption proves resistant, an ointment containing 5 to 30 grains of chrysarobin may be used, or the following formula: benzoic acid, 15 grains; salicylic acid, 15 grains; vaseline, an ounce. It is often an advantage to remove the



Fig. 90. Tinea circinata



Fig. 91. Lichenoid trichophytide



Fig. 92. Tinea unguium



Fig. 93. Tinea barbae



Fig. 95. Tinea tonsurans

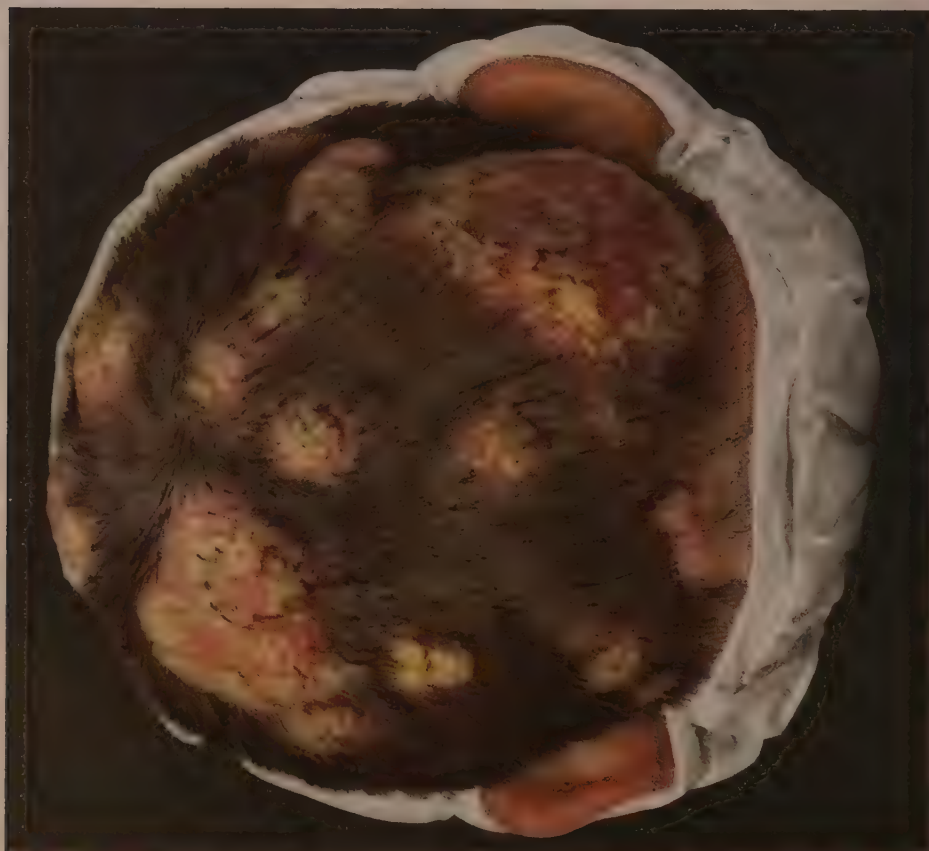


Fig. 94. Kerion Celsi

scales by a preliminary scrubbing with spirit soap. In the inflammatory and pustular forms of the disease it is better to employ milder applications, such as ammoniated mercury ointment, at first at least, as these lesions may be aggravated by the more active parasiticides.

Tinea Tonsurans (Plate 52, Fig. 95)

The hair of the head may be attacked both by the trichophytons and microsporons, the proportions varying in different countries. In England the *Microsporon audouini* is by far the most common cause of tinea tonsurans, accounting for about 90 per cent. of the cases. The disease is hardly ever met with in adults, being almost entirely confined to childhood. Further, microsporon infections of the scalp rarely persist after puberty, as at this period of life, for some unknown reason, the disease tends to die out, a fact having important bearing on diagnosis and treatment. The common microsporon form of the disease is seen on the scalp as round, scurfy patches covered with short, broken hairs (Fig. 95). These "stumps" have a white frosted appearance, due to the presence of the surrounding sheath of fungus, and they can be extracted without difficulty. The natural elasticity is lost in the infected hairs, so that if the patch be rubbed over, the stumps remain bent in various directions. As a rule, a number of such patches are present, and in neglected cases the greater part of the scalp may be involved, the hair then being markedly thinned, while the surface is covered with scales, among which the characteristic stumps appear. The trichophyton infections differ in their objective characters and in the tendency for the disease, if untreated, to persist beyond puberty. In one form the patches are smaller, and the affected hairs much longer—up to $\frac{1}{4}$ inch—than the above-described stumps, and much less numerous. They may be concealed among the normal hairs, and for this reason the disease is sometimes overlooked. In the uncommon black-dot ringworm, bald areas form upon which the affected hairs appear as black points; they are flush with the skin, coiled up under a tiny scale, and only removed with difficulty by a comedo extractor or needle.

Kerion Celsi (Fig. 94), or inflammatory ringworm of the scalp, is generally caused by one of the trichophytons, or less often by a microsporon. This type of ringworm is uncommon, and is frequently mistaken for an abscess, especially when a single lesion is observed. In kerion one or more raised boggy swellings are present, red in colour, with a glazed, angry-looking surface, upon which numerous purulent points, the follicular orifices, are seen. The hair is loosened and tends

to fall out, and can be extracted with remarkable ease. The lesions tend to undergo spontaneous resolution, leaving in their place red patches, which eventually become covered with hair, apart from certain cases where the baldness persists.

Diagnosis

Every scurfy or bald patch on the head of a child should be regarded with suspicion, and the diagnosis of ringworm confirmed or excluded by microscopic examination. In this investigation, care should be taken to select broken hairs or stumps, otherwise the examination is useless or even misleading. No difficulty will be experienced in microsporon infections, where the stumps are easily seen, and can be pulled out in bunches with forceps. In trichophytic disease, careful inspection with a lens will enable the operator to pick out one of the short hairs, or the "black dot" may be removed with a needle. A special difficulty arises when the scalp has been treated with an antiseptic or parasiticide ointment, and where, as a consequence, the characteristic aspect of ringworm is modified: new hair may grow, the scaling is diminished or removed, and the disease may even be considered cured.

Examination in such cases will generally reveal the presence of a few stumps, which under the microscope are found to be crowded with spores. Where ringworm and impetigo both affect the scalp, the impetigo disguises the former disease. A microscopic examination of suspicious hairs should be made, but, in any case, on the cure of the impetigo the underlying ringworm stands revealed.

Treatment

Ringworm of the scalp is an extremely contagious disease, and it is therefore usual to find more than one child in a family affected. Infection takes place by direct contact, or through the medium of caps, brushes, and the like. It is therefore important that these should be destroyed after cure to avoid reinfection. While the disease is thus easily communicated to other children, the risk of contaminating the adult scalp is fortunately extremely small. The most satisfactory and most rapid results are achieved through the agency of X-rays. Cure is obtained in a few weeks, as against months or years when external applications are employed. X-rays act solely as a depilatory, and have no parasiticide effect. The objective is to cause the temporary fall of every hair of the head, both healthy and diseased. Depilation of limited areas is nearly always unsatisfactory for two reasons: first, because it is impossible to be certain that the part of the scalp untreated

is not infected, and secondly, because the new hair, when it grows, may differ in texture or colour from that covering the untreated region. In the Adamson-Kienbock method, five points are marked on the scalp, each 5 inches apart, indicating the centres of the areas to be irradiated. Each area is treated separately, the X-rays being carefully localised by means of three wooden pegs attached to the X-ray tube, converging to touch the scalp at the marked point. By this means the whole of the scalp is exposed, the centre of each patch receiving a depilatory dose directly, the periphery indirectly by the overlapping of several areas. The dose is controlled either by the change in colour of the Sabouraud pastille placed half-way between the scalp and the anti-cathode, or, in the case of the Coolidge tube, by the electrical method, and although these are safeguards, the technique is extremely delicate, and should only be undertaken by those who have had considerable experience with X-ray apparatus. As a preliminary the hair must be cut quite short, and if dermatitis from previous applications or pyoderma is present, treatment should be deferred until these have been cured. Children under the age of five years are generally unsuitable subjects, for they are apt to move, with unequal or even over-exposure to certain areas as a consequence. After X-ray treatment the hair begins to fall in fourteen days, and defluvium is generally complete in about three weeks. During this period, to avoid coccal infection and to prevent the infected hair from flying about, weak ammoniated mercury ointment and regular washing of the head should be prescribed. The head should be enveloped in a cap boiled daily. In about six weeks the new hair begins to appear, the scalp gradually assuming its normal aspect, except that in some cases the hair reappears curly instead of straight. The risk of permanent baldness is often referred to, and although this may occur where every precaution has been taken, under modern conditions such an accident is exceedingly rare. Apart from X-rays, ring-worm of the scalp may be treated with various parasitocides or antiseptics applied locally. The objection to this form of treatment is that external applications are unable to penetrate the whole length of the follicle, and cannot therefore reach the deeper portions of the infected hair. Successful results may, however, be obtained by the use of remedies which by their irritant action cause the diseased hairs to become loose and fall out. Such are croton oil, chrysarobin, and Adamson's ointment, made of equal parts of salt and vaseline. All these remedies demand delicate manipulation, and may, if incautiously used, produce an unnecessarily severe reaction, and even scarring. The salt and vaseline ointment should be well rubbed in every morning, and the head fomented

at night. A folliculitis results, limited to the infected areas, by which means the disease is eventually cured. The method is a painful one, but can give good results if properly carried out.

X-rays should not usually be employed in the treatment of kerion, as this condition tends to undergo spontaneous cure. For the same reason it may be decided not to treat with X-rays a ringworm of the scalp observed at the age of puberty, provided the fungus is of the small-spored variety.

Lichenoid Trichophytide (Plate 50, Fig. 91)

In association with kerion, or with deep infected ringworm of the scalp or elsewhere, there may appear on the body diffuse or grouped eruptions of pin-head, red, lichenoid papules, resembling lichen scrofulosorum. Sometimes each lesion has a tiny spine or delicate scale, or the eruption may take the form of deep nodes, or even a scarlatiniform erythema. These efflorescences generally appear as the primary eruption is fading, and are regarded by many as allergic phenomena, although the successful cultivation in certain cases of the ringworm fungus from these secondary lesions suggests a dissemination through the blood-stream. Finnerud and others have recorded a similar lichenoid eruption (lichen microsporicus) secondary to ringworm of the scalp caused by the *Microsporon audouini*.

Tinea Unguium (Plate 51, Fig. 92)

Ringworm of the nails is a comparatively rare disease in this country, but is more common in the tropics. It may be met with both in adults and children, more often in the former, as an independent phenomenon or in association with ringworm elsewhere. Generally caused by a trichophyton of the animal group, the condition is exceedingly chronic, persisting for years. One or several nails of the hand or hands may be affected, and ringworm has also been observed in the nails of the feet. Infection takes place at the free edge or lateral border, producing gray scaly masses, which raise the edge of the nail itself, with, in consequence, either a general thickening and deformity, or a spongy, brittle state with a broken, frayed edge and a partially or completely eroded surface. Diagnosis can only be made with certainty by the discovery of the fungus in the nail substance, scraped off with a curette and soaked for six hours in liquor potassæ to allow of sufficient clearing of the specimen for microscopic examination. In a number of different diseases, such as psoriasis, eczema, and syphilis, the nails may be involved, but in these

cases the presence of the determining disease points to the nature of the nail affection. Treatment is on the whole unsatisfactory; as much as can be removed should be scraped away, and the nail dressed with Lugol's solution (iodine 5 parts, potassium iodide 1 part, water 100) under a loose rubber finger-stall. It may be considered necessary to remove the nail, afterwards employing salicylic acid ointment as a dressing, but even such drastic measures do not prevent relapse.

Tinea Barbæ (Plate 51, Fig. 93)

Ringworm of the beard presents itself in several different forms, varying in accordance with the type of fungus invading the hair, and the reaction of the individual. The eruption is commonly limited to the beard and whisker region, only very rarely affecting the moustache, a feature of some diagnostic value. The disease is usually contracted from a "dirty shave," or from animals, particularly horses. The eruptive elements may appear as red scaly papules or pustules, or in the form of dry scaly patches with plug-like stumps. More often the lesions are distinctly nodular and inflammatory. One form exactly resembles kerion of the scalp, or the inflammatory reaction may assume the form of infiltrated nodules covered with purulent points (Fig. 93). The hairs come out with ease, and the causal fungus can be found in them. It is generally stated that the fungus can be discovered without difficulty, but this is not the writer's experience, and in the more inflammatory types it may be necessary to examine a large number of hairs before a positive result is obtained. As the disease is not infrequently overlooked, it is a good rule to regard with suspicion, and make a microscopic examination in every case of sycosis. *Tinea barbæ* is sometimes associated with *tinea circinata*, which gives the clue to the diagnosis.

Treatment may be carried out by X-ray depilation, as in ringworm of the hairy scalp. In the markedly inflammatory or kerion forms it is better to avoid X-ray treatment, in the first instance at least, especially in view of the chance of spontaneous cure in some of these cases. Where depilation by forceps can be carried out systematically, a good result can sometimes be obtained with the aid of local antiseptic applications.

Tinea Cruris (Plate 55, Fig. 99)

The name *eczema marginatum* was formerly applied to this condition, but it has now been for many years recognised as a form of ringworm. The fungus causing the eruption, the *Epidermophyton*

inguinale, is the common agent of ringworm of the groins and axillæ, and is also responsible for the variety of eczematoid ringworm affecting the feet and hands. *Tinea cruris* is observed on the inner surface of the thighs in the form of red, sharply demarcated, itchy patches. These increase in size, and may coalesce into irregular areas with a polycyclic contour. The centre tends to fade and to become darker, while the periphery remains sharply demarcated and covered with squames. In men the eruption usually begins on the left side, where the scrotum is in contact with the skin, and may spread to involve both thighs, the scrotum, penis, and gluteal cleft. The axillæ are sometimes similarly affected, and in women the disease may be met with under the breasts, and in both sexes in the umbilical fold. By reason of the warmth and moisture in the chosen sites, there is a tendency for the eruption to take on an eczematous aspect. The disease is prevalent in the tropics, where it is known as dhobie itch, and while infection may be spread in the washing of clothing, the disease is probably more often contracted from the water-closet; the epidemic form occurring in institutions is explained in this way. Diagnosis is easily made by the microscope, the material for the examination being taken by scraping the edge of the patch, the squames so obtained soaked in liquor potassæ and examined in the usual way. This distinguishes the condition from seborrhœic eczema and intertrigo affecting similar regions. In the treatment of the disease parasitocides are used, such as benzoic acid and salicylic acid, of each 15 grains, vaseline an ounce. Painting the affected area with tincture of iodine, after the scales have been removed by washing with spirit soap, is efficacious, but extremely painful. In exceptional cases, a chrysarobin ointment containing 5 to 30 grains to the ounce may be employed, but has the disadvantage of staining the clothing and often causing considerable dermatitis. To prevent recurrence when the disease has been cured, all contact garments should be thoroughly disinfected. The *Epidermophyton inguinale* is also the causal fungus of eczematoid ringworm of the hands and feet (dysidrotic type). In many cases the eruption on the feet is limited to patches of thick, white, sodden skin between the toes, and from this source the groin infection may arise. The region between the toes should, therefore, be inspected, any suspicious lesion examined microscopically and, if ringworm fungus be detected, treated in the manner indicated above.

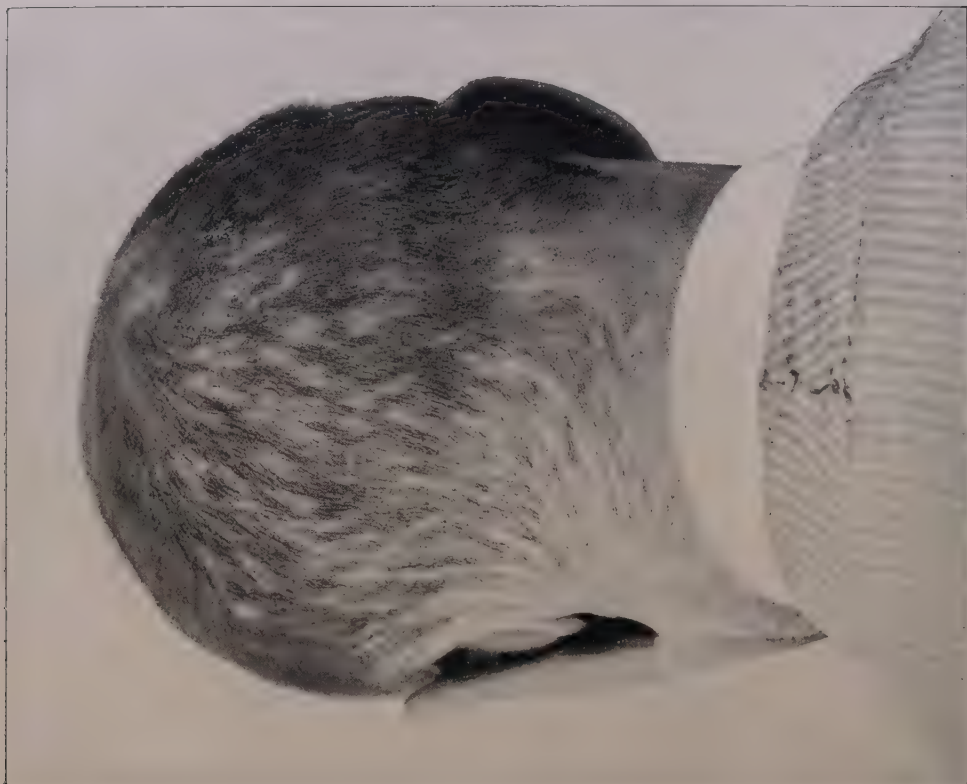


FIG. 97.—ALOPECIA SYPHILITICA.



FIG. 96.—ALOPECIA AREATA.

Alopecia

Alopecia Areata (Plate 53, Fig. 96)

This disease is usually seen on the scalp in the form of bald patches, from which the hair has fallen more or less abruptly. Alopecia areata is not, however, limited to the scalp, for similar bald patches may appear on the beard, moustache, eyebrows, and, indeed, in any situation where there is hair. In a few cases the disease is universal, or the scalp and eyebrows may alone be entirely bald. On examining a typical patch on the scalp, the following features can be observed: the patch is round or oval, the skin is white but of normal texture, and at the periphery or scattered over the surface a number of short hairs are seen, the "note of exclamation" hairs, so called from their peculiar shape—thick at the distal end, thinning perceptibly towards the root. When two or more round patches join together, an irregular area of baldness results. A band of baldness occasionally develops along the nape of the neck or forehead.

Etiology

It is best to admit that we possess no definite knowledge of the cause of this peculiar affection. The disease has been variously attributed to nervous causes, toxins, some defect of the endocrine system, and microbic infection. The parasitic theory has never been proved, and the opinion now generally held—that the disease is not contagious—is based upon good evidence. The epidemics reported from schools and institutions can only be explained by presuming some other disease, such as bald ringworm, or self-inflicted lesions. According to Sabouraud, a family or hereditary history can be obtained in about 22 per cent. of the cases.

Diagnosis

The disease is not infrequently first observed by some other person, generally a barber. There may be no abnormal sensations but, on the other hand, many patients, when questioned, admit to headache preceding the fall of hair. The patches on the scalp are not atrophic or scarred, a feature which distinguishes the disease from lupus erythematosus, pseudo-alopecia areata, and the bald areas following favus. It is most important to distinguish, in children, alopecia areata from ringworm, especially of the bald or black-dot variety. Reliance cannot be placed upon the "note of exclamation" stumps, as they may be present

in both conditions. The shining white patches of alopecia areata are usually distinctive, and in any case the conditions can be differentiated by microscopic examination of the hair. The bald patches occasionally following boils on the scalp are recognised by the history of the previous boil, and the red central spot in the bald area.

Prognosis

The prognosis depends upon the age of the patient and the form of alopecia. In young persons the chance of recovery is good; where dystrophy of the nails is found, the outlook is less favourable. Large numbers of stumps indicate a progressive phase of the disease, and the converse is approximately true. On the appearance of the first patch it is impossible to foretell what will happen, and the patient should be warned to expect others. Relapse and subsequent attacks are not uncommon, and a history of frequent relapses is unfavourable. The universal forms may persist for years, or even throughout the patient's life. The new hair, when it grows, is at first white, but nearly always regains its natural colour.

Treatment

As the disease may recover spontaneously, it is often difficult to say how far any form of treatment has contributed to the favourable result. Treatment with stimulating applications appears, however, to have a definite beneficial effect on the disease, and therefore ointments or lotions containing mercury, carbolic acid, or essential oils should be prescribed. Any deviation from normal of the general health should receive attention, and if there is seborrhœa of the scalp, this also demands treatment. The effects of ultra-violet light, general or local, are inconstant; the writer has, however, obtained very favourable results in two cases of universal alopecia areata, using a mercury vapour lamp.

Alopecia Syphilitica (Plate 53, Fig. 97)

The secondary period of syphilis is often marked by a general thinning of the hair, but besides this a special form of baldness is recognised, sometimes termed moth-eaten hair. The bald areas are small; the hair has not completely fallen from them; rather, it is thinned in patches. There are other signs of syphilis, including not infrequently the dappled syphilitic leucoderma of the neck. Recovery takes place under ordinary treatment, and the condition is of no special importance, except perhaps that, in the opinion of some authorities, it indicates an increased liability to disease of the central nervous system.



Fig. 98. *Trichophytia profunda nuchae*



Fig. 99. Tinea cruris



Fig. 100. Lupus vulgaris labii superioris et mucosae oris



Fig. 101. Lupus vulgaris serpiginosus

Tuberculosis of the Skin

True tuberculosis of the skin includes a number of clinical forms differing widely in their appearance and course, of which the following are the more important: lupus vulgaris, scrofuloderma, and tuberculosis verrucosa cutis. In these conditions the tubercle bacillus is present in the lesions and is the actual causal agent; its presence can be demonstrated in appropriately stained sections, and the proof can be carried a stage further by inoculating guinea-pigs with portions of the morbid tissue, producing in them tuberculosis. The microscopic architecture of the granuloma, the reaction of the individual to tuberculin or to the von Pirquet test, afford additional but not conclusive evidence of the nature of the lesions. These methods, but particularly the first two, have enabled dermatologists to classify true tuberculosis of the skin, and to distinguish it from the tuberculides and sarcoids where the tuberculous nature is suspected but not proved.

Lupus Vulgaris (Plates 56 to 60, and 63 to 65)

This condition may be defined as a chronic granuloma of the skin and mucous membranes, beginning in early life and progressing slowly to an ultimate cicatrix. Brown translucent spots, the "apple-jelly nodules," are usually easily detected in some part of the eruption.

Etiology and Pathology

The disease is prevalent in Europe, especially the northern regions, but is much less frequently observed in tropical countries; in Australia, it is stated, nearly all the cases are imported. Statistics show that in more than half of the cases the disease begins before the age of ten, and that 80 per cent. are affected before twenty years (Sequeira). Lupus may be associated with tuberculosis of the glands or bone, and pulmonary tuberculosis may develop as a sequel. The disease is actually less common than would appear to be the case. Patients often continue to attend hospital for periods of five to even twenty or more years; thus, a number of the same patients are always under observation, giving a false impression of the relative incidence. Lupus vulgaris beginning in

adult life or old age is rare, but may be observed from time to time. The general opinion that the bacillus gains entrance to the skin through some tiny cut or abrasion is supported by the frequent appearance of the disease on the face, an uncovered region of the body peculiarly exposed to inoculation. It is also possible for infection to follow direct extension from a mucous membrane.

In certain cases the infection occurs through the blood-stream, as in the sudden outburst of a number of lesions in the form of disseminated lupus following measles. The minute anatomy of a lupus nodule is, in its general characters, similar to that observed in tuberculosis elsewhere. The principal changes occur in the dermis, where there are round-cell and plasma-cell infiltrations with, in most cases, well-developed giant cells. The blood capillaries tend to disappear, so that the cellular formation is markedly avascular, in striking contrast to the syphilitic granuloma. The glandular structures are gradually destroyed, and scar tissue develops. Acid-fast bacilli can always be found, but the search for them is very tedious, and necessitates the examination of a great number of serial sections. Both the human and bovine types of bacillus have been identified, the former accounting for over 60 per cent. of the cases.

Symptoms

Lupus vulgaris may affect any part of the skin of the body but shows a decided preference for the face, especially the nose, cheeks, and ears. In nearly one-third of the cases the mucous membranes are attacked; the lesions are often hidden in the nose and elsewhere, and may easily be overlooked unless a special search is made for them. The earliest stage of the disease is not often seen, the condition being considered trivial until its spread and persistence make evident the necessity for expert advice. The first lesions appear in the form of small, red spots, or patches, in which the pathognomonic apple-jelly nodules can be demonstrated (Fig. 114). These nodules are generally obscured by hyperæmia, and it is usually necessary to press the blood out of the vessels with a glass slide or glass tongue-depressor to bring them into view. They are often best seen at the edge of a fully-developed patch standing out prominently in the skin (Fig. 106), and appear as reddish-brown, translucent, slightly elevated, pin-head-sized points. When the disease has existed for some time and has extended, the typical appearances of lupus vulgaris are seen. The lesion is flat, with an irregularly convex border containing numerous apple-jelly nodules, the centre gradually becoming cicatricial. The colour is a dusky red, except in the



Fig. 103. Lupus vulgaris "maculosus"



Fig. 102. Lupus vulgaris hypertrophicus



Fig. 104. Lupus vulgaris serpiginosus et mutilans



Fig. 105. Lupus vulgaris manus; Mutilatio

scarred portion, which is paler, and there is sometimes definite scaling. In this form, termed *lupus exedens*, the condition may continue, gradually spreading without breach of surface, for years, involving large areas of skin. A single patch may exist, or the lesions may be multiple, and if close enough together may coalesce, producing a serpiginous figure (Fig. 101). In other cases the patch is distinctly elevated (*lupus discoides*), or it may become hypertrophied and warty, either generally or at its edges alone (Fig. 102), a form closely allied to *tuberculosis verrucosa cutis*. The cicatricial tissue may be unusually developed, involving the cartilage of the nose, and leading to considerable deformity (Fig. 106). In other cases, instead of the dry form, the disease assumes a crusted, vegetating, impetiginous, or ulcerative character (*lupus exedens*), and may even in very rare instances rapidly destroy the tissues (*lupus vorax*), leading on the face to horrible mutilation (Fig. 109). A similar process may involve the extremities, with destruction of the fingers (Figs. 104 and 105). After certain of the infectious fevers, but particularly measles, a disseminated form of *lupus* may occur; the eruption is usually widely spread, and while it may conform to the common type of the disease, it more often resembles one of the tuberculides. *Lupus* of the mucous membranes is met with in from one-third to one-half of all cases, appearing on the palate, gums, nasal mucous membrane, and elsewhere. The disease may be confined to a mucous membrane, or may spread from it to the skin, or *vice versa*. The nasal mucosa is the most frequently attacked, often leading by direct extension to a patch of *lupus* about the nostril (Fig. 118). On the palate a red, œdematous, granular area develops, with multiple superficial ulcers. When the gums are affected they become swollen and ulcerated, the teeth being loosened by the process (Fig. 115). *Lupus* of the tongue is very rare, and may appear in a papillomatous form, or sometimes as a flabby longitudinal ulcer (Fig. 119).

Complications

Pulmonary tuberculosis sometimes develops during the course of *lupus*, but this, in the writer's experience, is uncommon. Occasionally *lupus* of the extremities is followed by tuberculous lymphangitis and adenitis, a chain of enlarged glands appearing along the arm or leg. When the eruption is below the eye troublesome ectropion may develop, and in these and in other cases an attack of erysipelas may occur, often with distinctly beneficial results so far as the *lupus* is concerned. The most serious complication, fortunately rare, is seen in the development of an epithelioma on some part of the area affected. This cancer

assumes the prickle-cell type, and although generally held to be highly malignant, is not necessarily so, for it often avoids contamination of the lymphatic glands and remains a purely local disease; a patient now under observation has had three separate tumours removed at intervals of years. Cancer superimposed on lupus is often attributed to X-ray treatment, and while it may occur when X-rays have not been used, it is certainly more common among those who have undergone a course of radio-therapy.

Diagnosis

The diagnosis of lupus vulgaris is established by the remarkably chronic course of the disease, the tendency to peripheral spread with central scarring, and the presence of the apple-jelly nodules in the active edge and scar. In the ulcerative and hypertrophic forms some difficulty may be experienced in coming to a conclusion, but their course and their situation, generally on the face, serve as guides to the nature of the complaint. Tertiary syphilis appears later in life and spreads very rapidly in comparison with lupus; the outlines of the lesions are more definitely serpiginous, and the scar contains no apple-jelly nodules. Lupus vulgaris serpiginosus affecting the extremities (Fig. 104) bears a very close resemblance to a late syphilide. In this and other doubtful cases the Wassermann reaction affords a guide to the nature of the complaint. Lupus erythematosus also affects the face, but the onset is later; the eruption is not infiltrated, and is dotted over with plugged sebaceous follicles or covered with a dense white scale. Rodent ulcer has occasionally been mistaken for lupus developing late in life. The characteristic pearly edge should prevent confusion, and in any case a microscopic section made from a small portion of the growth will definitely decide the question.

Treatment

The treatment of lupus vulgaris is both local and general. Local measures aim at the destruction of the bacilli in the lesions, and this may be effected in various ways, such as boring out each soft nodule with a sharp stick dipped in acid nitrate of mercury. Adamson has obtained admirable results by painting the lesions with this acid, but there is a slight risk of mercurial poisoning if too extensive an area is treated at one time. Erasion or scraping is decidedly valuable where the lesions are small, but is generally insufficient of itself. The operation is performed under a general anæsthetic, all diseased tissue being thoroughly and firmly scraped away with a sharp spoon. The wound may immediately



Fig. 106. *Lupus vulgaris cicatrisans*



Fig. 107. *Lupus vulgaris*; *Cornu cutaneum*



Fig. 108. Lupus vulgaris; Epithelioma

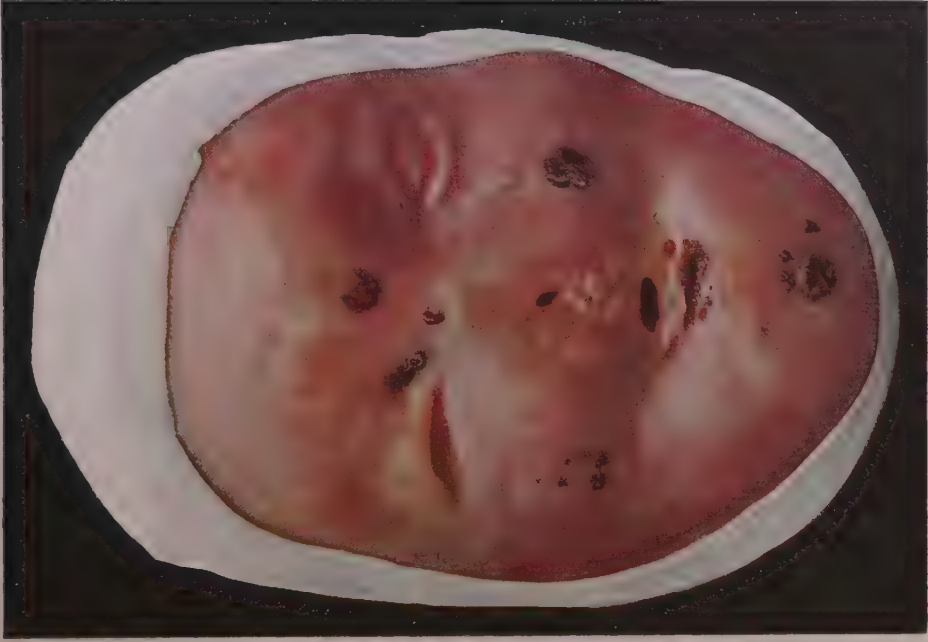


Fig. 109. Lupus vulgaris faciei (Mutilatio gravissima)

be treated with caustics or antiseptics, or the following method adopted: all bleeding is stopped by simple pressure, and the wound dressed in the ordinary way; on the next day an ointment containing 1 drachm of pyrogallol in an ounce of vaseline is applied, and this is repeated for three days. At the end of this period the lesion presents a dirty ulcerated appearance, but cleans rapidly with fomentations, after which the usual form of surgical treatment is carried out until the surface heals. The immediate results of erosion, especially when reinforced by some method such as the above, are excellent, but as it is usual for a number of active spots to appear subsequently, the patient should be kept under close observation in order that these may be destroyed with acid, or in other ways. Local treatment also includes multiple puncture with the cautery and scarification, the diseased tissue being minced first by a number of superficial parallel incisions, and then by others at right angles. In view of the frequent infection of the nasal mucosa, careful investigation should be made of this region of the body, and if disease be discovered, suitable treatment (with the cautery, for example) carried out. The Pfannenstiël method consists in the administration of 15 grains of sodium iodide thrice daily, together with the packing of the nasal cavity with gauze soaked in peroxide of hydrogen solution. General treatment has as its object the modification of the tissues so that they become a less suitable medium for the invading micro-organism. Tuberculin in small increasing doses appears to benefit some patients, but is on the whole a disappointing remedy. The measures adopted include all those employed in the treatment of tuberculosis in general—abundant fresh air, cod-liver oil, tonics of iron and arsenic, and suitable feeding.

Ultra-violet light has long been used locally, either by the Finsen method, where the actinic rays from an arc lamp are concentrated on the lesion, or by the Kromayer mercury vapour lamp. The results obtained, especially by the former, have been excellent, the disease being sometimes completely cured, leaving a supple scar. Local ultra-violet light can, however, only be used with satisfaction in dry, non-ulcerative lupus, and there are many cases which refuse to respond to this, and, indeed, to every form of treatment, both local and general. Since the introduction of the general ultra-violet light bath, where the whole body is exposed at regular intervals to the actinic rays, the treatment of lupus has been revolutionised.

This method, like every other, has its limitations, but it has nevertheless increased the percentage of cures, and is effective even in some of those cases formerly regarded as intractable. To obtain the maximum benefit, it is essential to continue some form of local treatment. The

ultra-violet light may be derived from different sources, of which the carbon arc is probably the best, but the particular form of apparatus is of less importance than the manner in which it is used. In the past, X-rays were regarded with favour by many dermatologists, but as to obtain cure, it is necessary to bring about radio-dermatitis, with the liability to subsequent malignant degeneration, it is now generally held that this form of therapy should only be given trial in exceptional cases.

Scrofulodermia (Plate 61, Figs. 110 and 111)

The name scrofulodermia is applied in a somewhat loose fashion to certain forms of tuberculosis of the skin, the result of extension from bone or gland tuberculosis. By reason of its mode of origin it is most often seen on the neck, but may also occur on the limbs or elsewhere, and as the conditions from which it is derived are commonest in children and young adults, it is nearly always observed in the earlier periods of life. In the neighbourhood of one of these primary foci—for example, a broken-down tuberculous gland—the skin becomes tumid and swollen and an abscess forms, the covering integument being dark red, brown, or of a purple tint. The contents of this gumma-like lesion are usually discharged either through a single opening or through a number of separate sinuses (Fig. 111). There usually follows an ulcer with characteristic flabby, overhanging edges. The base of the ulcer is sero-purulent, and if the pus and débris desiccate, a crust results (Fig. 110). Sometimes when the contents have been evacuated the lesion heals up, but it is more usual for gradual extension to take place. The borderline between this form of tuberculosis cutis and lupus vulgaris is ill-defined, and this is shown by the not infrequent presence of patches of true lupus vulgaris in the extending margin. The scar on the neck is singularly irregular, with bands, bridges, and tags, but on the limbs the ulcers may heal up, leaving a depressed pigmented scar, often associated with lymphangitis and solid oedema of the parts (elephantiasis, Fig. 110).

Treatment depends upon the form assumed by the disease. The lupus patches, if present, demand the same treatment as is used for lupus generally. Where there are ulcers and sinuses, these should be scraped out and treated with iodoform or eusol, and any abscess opened and similarly dealt with. The primary bone or gland disease should not be neglected. Tuberculin may be administered, sometimes with distinct benefit; the ultra-violet light bath is now a recognised and remarkably successful method of treatment in this disease.



Fig. 110. Scrofuloderma (Elephantiasis)



Fig. 111. Scrofuloderma



Fig. 112. Tuberculosis verrucosa cutis



Fig. 113. Lupus erythematosus disseminatus



Fig. 114. Lupus vulgaris



Fig. 115. Lupus vulgaris mucosae oris



Fig. 116. Verruca necrogenica

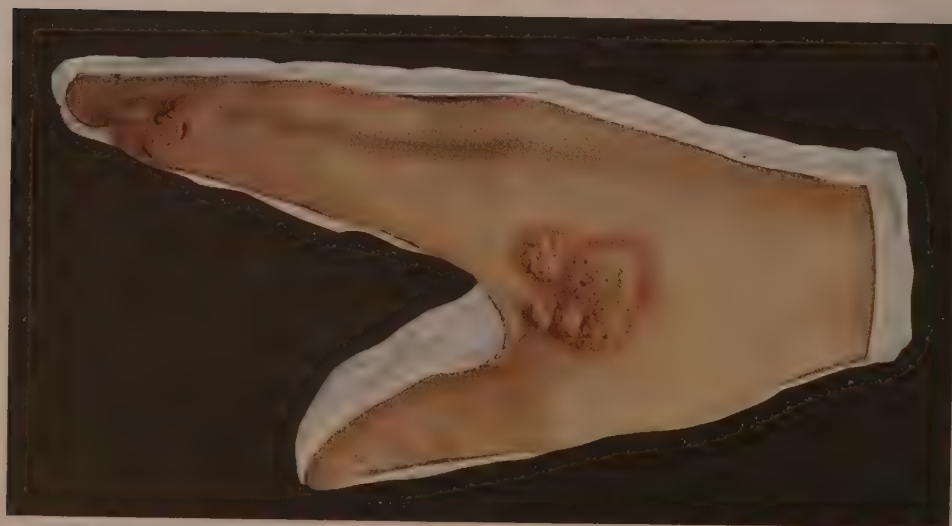


Fig. 117. Tuberculosis verrucosa cutis

Tuberculosis Verrucosa Cutis (Plates 62 and 64)

The so-called warty tuberculosis of the skin is seen in two forms: the first where patches or areas are covered with numerous, closely set, warty elevations, and the second where there is only a single, red, inflamed lesion. Both conditions are due to direct inoculation with Koch's bacillus, and are therefore more commonly seen on the hands, knees, or feet of those coming into contact with tuberculous individuals or tuberculous material, such as medical men, nurses, veterinary surgeons, and butchers. In the first form there appears, generally on the finger or back of the hand, an oval patch presenting a warty surface (Fig. 117). From between the individual warts purulent matter can be squeezed, and this is a characteristic feature in most of the cases. The eruption extends slowly, and generally flattens in the centre with scar formations. The periphery in these cases is warty and often crusted, the skin immediately beyond being markedly erythematous (Fig. 112). In the second form, verruca necrogenica, or pathologist's wart (Fig. 116), the lesion is much more virulent and more rapid in its development, probably from the invasion of secondary pyogenic organisms. Within a short time of inoculation an angry, tender papule appears, often capped with a purulent or scaly point, increasing in size to form a warty growth with an inflammatory halo. The disease often spreads to the neighbouring glands, which become enlarged and may caseate, or even to the viscera.

Treatment

In the first form the disease may be scraped away with a sharp spoon and a full pastille dose of X-rays given: or destructive ointments, such as pyrogallol, a drachm, in vaseline, an ounce, applied. The ultra-violet light bath may be employed, especially in extensive cases. The second or acute form should be treated by excision and cauterisation of the base.

Lupus Erythematosus (Plates 66 and 67, Figs. 121, 122, 123, and 124)

Lupus erythematosus is a chronic inflammatory disease of the skin characterised by erythematous patches, often scaly, with a special tendency to cicatrisation. The lesions affect the face, scalp, ears, and hands, and are usually symmetrical. A rare acute variety is also described.

Etiology and Pathology

The disease, an uncommon one, is generally observed in adults between the ages of twenty and forty years, but may, in exceptional circumstances, be met with in children and old people. Females are

affected five times as often as males. It has long been held that a relationship exists between lupus erythematosus and tuberculosis. Active or latent tuberculosis can be demonstrated in some cases, or, failing this, there may be a strong family history of tuberculosis. Although the experiment has only very occasionally been successful, a number of observers have actually succeeded in tuberculising the guinea-pig with tissue from the lesion in the human subject. Thus, Cannon and Ornstein produced tuberculosis, both macroscopic and microscopic, in guinea-pigs from five out of a series of twenty-three cases of lupus erythematosus.

The second view, that the disease is a toxæmia having origin in focal sepsis of the teeth, tonsils, pelvis, and elsewhere, is based upon the disappearance or improvement of the eruption when the presumed source is eliminated or treated. Sir Malcolm Morris had seen cases which clearly had their origin in a septic condition of the gums, and Barber has directed attention to infection of the tonsils, and the benefit following their enucleation and the administration of autogenous vaccines. The acute cases are perhaps even more suggestive, for in some at least a careful post-mortem examination has failed to reveal any evidence of tuberculosis; streptococci have also been cultivated from the blood both before and after death. These views are not merely doctrinal; they have an important bearing on treatment. Therefore, in any given case, each should receive due consideration. The pathological anatomy favours a toxic theory. There is œdema of the papillary body with infiltration of lymphocytes about the blood-vessels, and, very exceptionally, giant cells. The horny layer is thickened, and penetrates the orifices of the sweat and sebaceous glands, forming the horny spines observed on the under surface of the scales.

Symptoms

The chronic discoid, or fixed, type begins as a red patch, usually on the nose or cheek. Other similar patches appear, assuming a symmetrical distribution. The lesions spread and become confluent, sometimes involving the cheeks and nose in the "bat's-wing" or "butterfly" form (Fig. 121). Some degree of scaling is common, amounting in typical cases to a gray adherent covering of the plaque. If the scale is picked off, the horny plugs mentioned above can be observed on the under surface in the form of tiny spines. The evolution of the lesions is slow, and, at a later stage, the central portion becomes atrophic, forming a white scar surrounded by a red zone; or the whole lesion may be converted into a cicatrix. Similar changes may be observed on the ears, scalp, and backs of the fingers. On the ears the scar tissue may occasion



Fig. 118. Tuberculosis nasi



Fig. 119. Tuberculosis linguae



Fig. 120. Papulo-necrotic
tuberculide



Fig. 121 and 122. Lupus erythematosus



Fig. 123 and 124. Lupus erythematosus

considerable deformity. In about one-quarter of the cases the mucous membranes are involved—for example, the red margins of the lips, which then appear as if painted with collodion—or the buccal mucosa, where red or white patches may form, sometimes with an eroded centre.

Diagnosis

The eruption is recognised by its distribution, its slow evolution, the sharply demarcated aspect of the individual lesions, and the typical scaling. In the older lesions the central atrophic change is sufficiently characteristic. Lupus vulgaris begins at an earlier age, and is easily distinguished by the presence of the “apple-jelly” nodules. A superficial variety of lupus vulgaris described by Leloir (*lupus vulgaire érythématoïde*) resembles lupus erythematosus, but is differentiated by the same test, or by a biopsy. On the hands the eruption of lupus erythematosus may be mistaken for chilblains; it differs in persisting through the summer and in its tendency to form scars. Acute or disseminated lupus erythematosus has been chiefly observed in young women, and is characterised by its rapid evolution and the severity of the accompanying phenomena, such as fever, albuminuria, and arthritis. The eruption may appear in extensive erythematous areas over considerable parts of the body, either primarily or during the course of the chronic form of the disease. The prognosis is grave, a fatal issue being common. In some of these cases streptococci in pure culture have been obtained from the blood.

Treatment

Treatment aims at the removal of any form of focal infection, especially of the teeth or tonsils, the application of suitable local remedies, and the administration of drugs, such as quinine or salicin. The choice of the local remedy demands some judgment, the patient's reaction being carefully observed in order to avoid aggravating the disease. Soothing applications such as calamine lotion may be used, or the lesions may be painted occasionally with tincture of iodine, or once a week with carbolic acid 1 part and lactic acid 3 parts. Excellent results often follow refrigeration, a pencil of CO₂ snow suitably shaped being applied for ten to fifteen seconds with light pressure. Other methods, such as linear scarification, friction with spirit soap, and the thermocautery, all have their use, but require careful management. Of internal remedies, quinine has proved the most satisfactory, and should be given up to 5 grains thrice daily. The results of treatment are often disappointing, and while improvement can be obtained in some cases, in others little progress is made.

The Tuberculides

Under this name, first used by Darier, are included a number of cutaneous affections which are frequently associated with manifest tuberculosis of the bones or lymphatic glands. Since, in the great majority of cases, tubercle bacilli are absent from, or have not been found in, the cutaneous lesions, it has been suggested the tuberculides might be due to toxins derived from some distant tuberculous focus, and on this assumption they were named toxi-tuberculides. Another view presumes the sudden discharge from the primary focus of bacilli which are carried in the blood-stream, and there become so much modified that they reach the skin in a dead or attenuated condition. This theory would explain the occasional presence of acid-fast bacilli in the cutaneous lesions. Other authorities hold that the tuberculides are of the nature of allergic phenomena. The connection between the various members of the group is shown by the not infrequent association together at one time of two different eruptive forms, and by the transitional types occasionally observed. Before the nature of the tuberculides had been recognised, an extensive terminology based upon the morphological characters of the lesions had already come into general use, and while redundant, and therefore confusing, the original names are still retained as convenient labels. Most authorities admit to the group such conditions as the papulo-necrotic tuberculides, lichen scrofulosorum, Bazin's disease and the sarcoids; others add lupus erythematosus, lupus pernio and granuloma annulare, but their inclusion is open to criticism.

Papulo-Necrotic Tuberculides (Plate 65, Fig. 120)

This group embraces a number of slightly different forms; the characteristic element is a red papule which undergoes central necrosis and terminates in a scar. The disease is not very rare, and is observed in young subjects on the hands and feet, which may be red and swollen (acro-asphyxia), or occasionally about the elbows and knees. Some form of tuberculosis of the glands or bone is commonly present. The eruption in *folliclitis*, the name given to the principal type, generally appears symmetrically in a series of crops, which prolong the course of the disease for months or years. Each element begins as a tiny elevation situated in the dermis; it gradually increases in size, undergoes

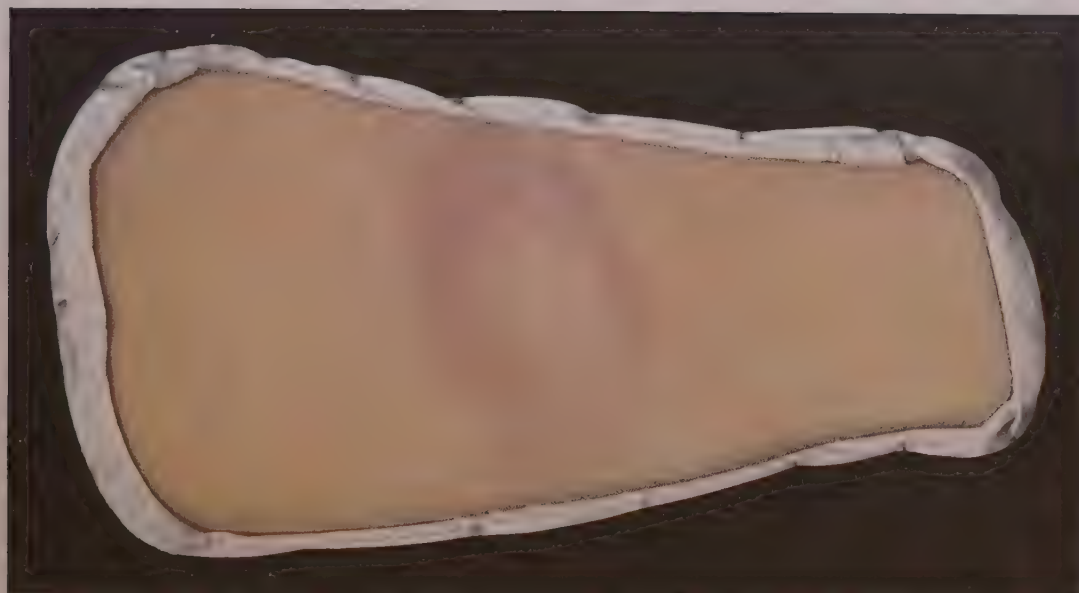


Fig. 125 and 126. Erythema induratum (Bazin)

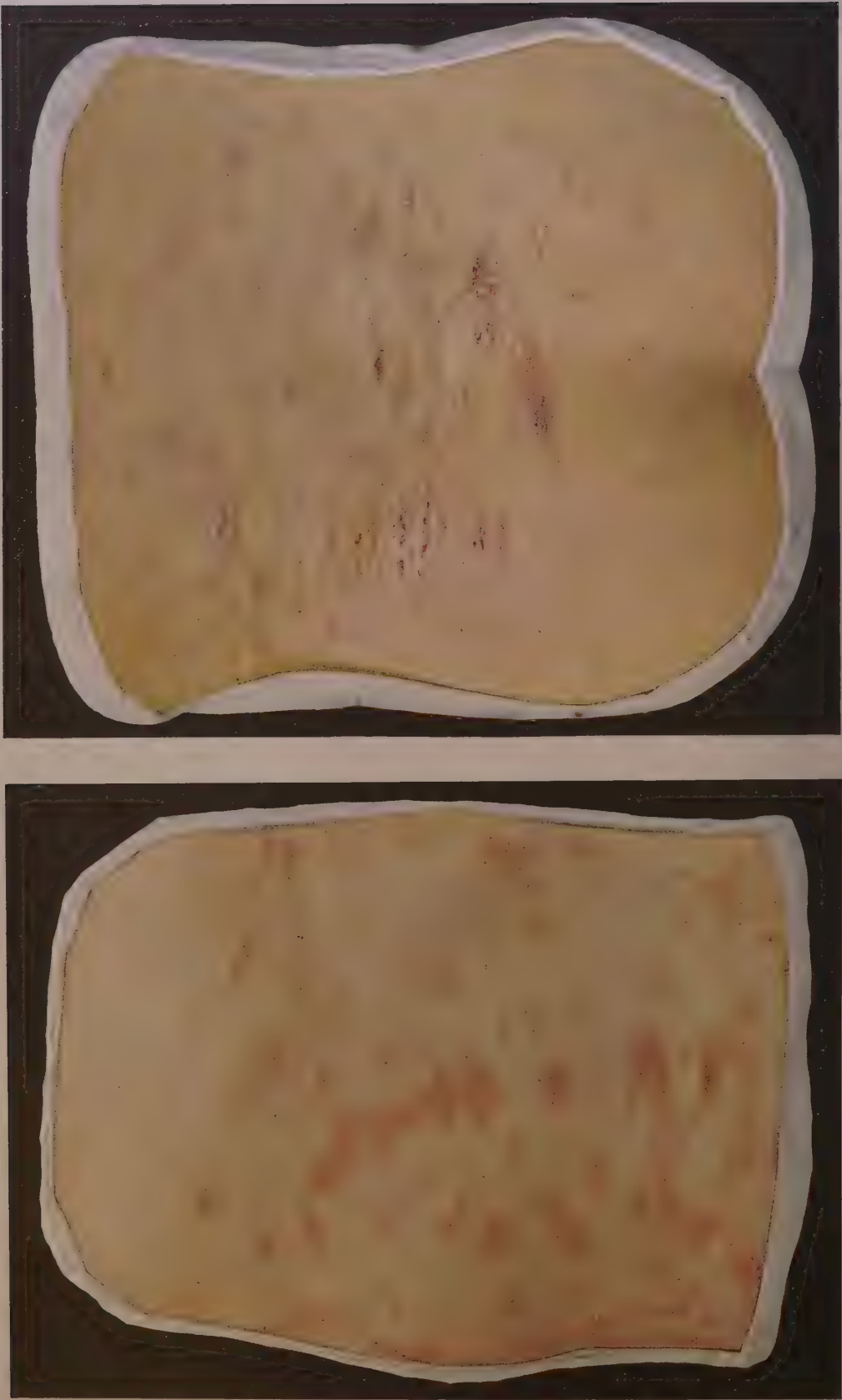


Fig. 127 and 128. Lichen scrofulosorum

central necrosis, becomes crusted and finally disappears, leaving a small pigmented scar. On the face and ears a similar eruption, termed *acnitis*, may develop. *Acne cachecticorum*, another variant, occurs on the limbs, and to a lesser degree on the trunk. The lesions are similar in their general course and objective characters, but are more superficial, and approximate to some forms of lichen scrofulosorum.

Treatment may be carried out by intravenous injections of novarsenobenzol, a remedy which sometimes gives good results, but just as often fails to influence the eruption. The relationship of the disease to tuberculosis calls for a suitable environment and such remedies as cod-liver oil and tuberculin. The ultra-violet light bath causes the eruption to clear up rapidly in many cases, probably by its general rather than by its local effect.

Acne Necrotica (Varioliformis) (Plate 70, Fig. 129)

This rare disease bears a resemblance to the conditions described above, but is actually a dubious form of tuberculide; it is often associated with seborrhœa of the oily type. The individuals affected are usually adults, the eruption appearing on the forehead and temples as red follicular papules in which central necrosis occurs, followed by well-marked scars resembling the pitting of smallpox. The course is prolonged, the eruptive elements continuing to appear in crops for years, sometimes even spreading to the ears, nose, and upper parts of the trunk. Treatment is best carried out by ointments containing sulphur; while the lesions often respond in a remarkable manner, there is in all cases a decided tendency to relapse.

Lichen Scrofulosorum (Plate 69, Figs. 127 and 128)

This is probably the commonest member of the tuberculide group and has been the longest recognised as a condition definitely associated with some form of tuberculosis. The eruptive elements are grouped into patches of variable dimensions, and these patches are located on the trunk and elsewhere, commonly in a symmetrical fashion. The eruption is remarkably persistent, often remaining unchanged for months or years and then disappearing abruptly, possibly to recur later. The individual lesions take the form of round or acuminate pin-head-sized papules, brown or pink in colour, often covered with a tiny scale, or presenting a distinct spiny process. Some of the lesions are follicular, and may necrose in the centre, in this way resembling *acne cachecticorum*. Lichen scrofulosorum is not entirely confined to childhood,

for it has occasionally been met with in young adults. The microscopic structure of the papules is distinctly tuberculoid; there are collections of round and plasma cells in the dermis, with an occasional giant cell. The tubercle bacillus has in a few cases been discovered in the lesions.

Diagnosis

The condition may be mistaken for lichen planus, the small papular syphilide, patches of seborrhœic dermatitis, and the lichenoid trichophytides. Lichen planus is itchy and tends to affect the mucous membrane of the mouth, and is uncommon in children. The follicular or small papular syphilide is an eruption of the secondary stage, and therefore other evidence of syphilis, including a positive Wassermann reaction, can be obtained. The trichophytides are similar in appearance, but the associated inflammatory ringworm of the scalp indicates their nature.

Treatment

Treatment is similar to that employed in the papulo-necrotic tuberculides.

Sarcoid

The name sarcoid has been given to certain rare indolent granulomata occurring in the dermis (lupoids of Boeck), or in the hypoderm (sarcoids of Darier and Roussy). They have distinct affinities with Bazin's disease, granuloma annulare, and lupus pernio. The *dermic sarcoids*, or lupoids of Boeck, appear principally on the face as small, reddish-brown papules arranged symmetrically, which persist for a certain time and eventually fade, leaving a slight scar. Another form is also described where the lesions are less numerous and larger, but otherwise similar. The *hypodermic sarcoids* first described by Darier and Roussy are even less often observed. They occur as indolent nodules, the size of a nut or larger, sometimes in rows, along the ribs, over the scapula, on the thighs and elsewhere. The covering skin may be reddish-brown or normal in colour, and is often attached in places to the underlying mass. Hypodermic sarcoids are generally mistaken for tumours or gummata, but they do not break down or ulcerate.

Erythema Induratum (Bazin's Disease) (Plate 68, Figs. 125 and 126)

A chronic granuloma affecting the legs, almost exclusively confined to young women. The condition is allied to the sarcoids of Darier and Roussy, but differs in its situation and in its tendency to break down and form ulcers.



Fig. 129. Acne necrotica (varioliiformis)



Fig. 130. Granulosis rubra nasi

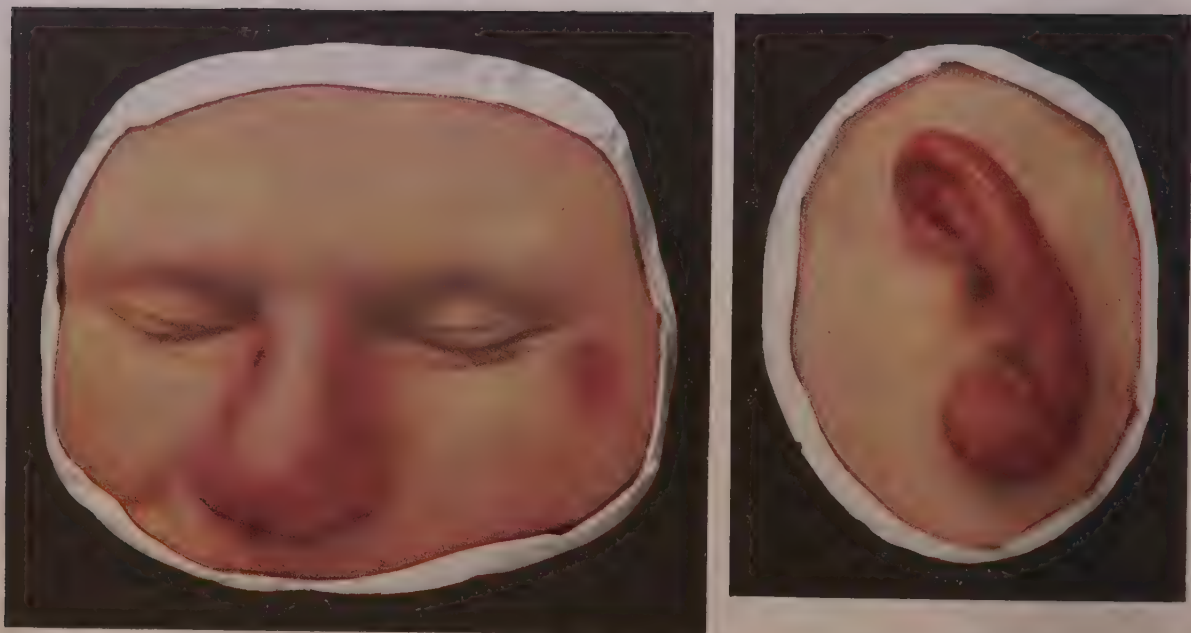


Fig. 131 and 132. Lupus pernio



Fig. 133. Granuloma annulare

Etiology

The disease, an uncommon one, occurs between the ages of twelve and twenty-five. No explanation can be given to account for the marked preponderance of the disease in the female sex, for although boys and men have been affected, such cases are extremely rare. The microscopic structure is distinctly tuberculoid, including cellular infiltrations in the hypoderm, with an occasional giant cell. Tubercle bacilli have not been found, although the guinea-pig has on a few occasions been infected with the morbid tissue.

Symptoms

The earliest lesions consist of small, deeply placed nodules, which can be felt on passing the hand down the back of the leg. These nodules gradually increase in size, and tend to form ill-defined masses covered by purple-red or brown skin. The nodule may remain unchanged for a considerable time, may resolve, or may break down and discharge its contents, a sluggish ulcer resulting. The eruption is characteristically situated on the calf region and outer part of the leg. On healing, the lesions usually leave a scar surrounded by an area of pigmentation.

Diagnosis

The disease has such characteristic features that diagnosis is as a rule easily made. It is distinguished from syphilis by its symmetry, the age of the patient, and its negative Wassermann reaction.

Treatment

The best results are obtained when the patient is kept in bed. If ulcers form, the usual antiseptic treatment should be instituted, and small doses of X-rays given. The ultra-violet light bath helps in some cases, and in others intravenous injections of novarsenobenzol have a beneficial effect.

Lupus Pernio (Plate 71, Figs. 131 and 132)

This rare disease is characterised by purple-red swellings on the nose, ears, and cheeks. The fingers may also be affected, becoming deformed and fusiform in outline. The researches of Schaumann have shown that the lesions are made up of masses of round cells with an occasional giant cell, and that similar cellular infiltrations occur in the tonsils, lymphatic glands, bones, and elsewhere. X-ray photographs of the affected hands usually reveal peculiar clear areas in the bones, which are characteristic of the disease. The condition should be dis-

tinguished from the form of lupus erythematosus termed chilblain lupus by Hutchinson. The malady follows a chronic course, but may possibly be influenced by intravenous injections of arsenobenzol, or by local applications of X-rays.

Granuloma Annulare (Plate 71, Fig. 133)

This curious ringed eruption has marked affinities with the sarcoids, both in its histological and clinical characters. The fully-formed lesion is composed of a number of white or light-reddish nodules arranged around a flat centre. One or several rings may be present on the backs of the hands, fingers, and elsewhere; by coalescence irregular polycyclic figures are sometimes formed. After remaining unchanged for months or years, the eruption tends to clear up spontaneously, leaving no trace of its presence. Treatment includes X-rays and injections of tuberculin.

Granulosis Rubra Nasi (Plate 70, Fig. 130)

This name was given by Jadassohn to a peculiar form of hyperidrosis localised to the tip of the nose. The disease, an extremely rare one, occurs during the period of childhood, and persists for years, eventually disappearing spontaneously about the period of puberty. The skin covering the cartilaginous portion of the nose, although cold to the touch, is constantly beaded with droplets of sweat, and is distinctly reddened and granular from the presence of numerous small pink papules. The eruption is sometimes also present on the upper lips and cheeks. The red papules bear a resemblance to the apple-jelly nodules of lupus, but differ in disappearing entirely on pressure under a glass slide. Treatment has no influence on the disease.



Fig. 134. Elephantiasis penis et scroti

Hypertrophies and Atrophies

Elephantiasis Penis et Scroti (Plate 72, Fig. 134)

Elephantiasis is caused by lymphatic, and to a certain extent venous, obstruction causing a chronic hypertrophic condition of the skin and subcutaneous tissue. This obstruction may depend upon the surgical removal of lymphatic glands, or on streptococcal or syphilitic lymphangitis. Filarial elephantiasis is essentially a tropical disease, but imported cases are occasionally met with in this country. On the genital organs—apart from the tropical cases—elephantiasis is usually a manifestation of the late or tertiary period of syphilis. The scrotum and penis become swollen and oedematous, only pitting with difficulty; the surface is red and the whole integument markedly thickened (pachydermia). In consequence of these changes, the normal lines of the skin tend to become obliterated, but there develop deep new folds, between which decomposing material tends to accumulate. The surface may be warty, or there may appear on it numerous lymphatic varices, from which, if pricked with a needle, lymph exudes freely.

Apart from local measures to prevent secondary infections, little can be done to relieve the condition. Intensive antisymphilitic treatment occasionally brings about some improvement.

Rhinophyma (Plate 73, Fig. 135)

This hypertrophic disfigurement of the nose has already been described under “Rosacea” (Fig. 10). The treatment is surgical, either by peeling off the redundant tissue, or by removing wedges from the more prominent masses. The writer has obtained improvement from radium buried in tubes throughout the growth.

Sclerodermia (Plates 73 and 74, Figs. 136, 137, and 138)

Sclerodermia is met with either in a generalised or a localised form, and is characterised by a peculiar hardness of the affected tissues, with subsequent atrophic changes.

Etiology and Pathology

Although various theories have been offered to explain the origin and nature of scleroderma, none is entirely acceptable, and the actual cause still remains unknown. The peculiar distribution of the plaques or bands (in the localised form) seems to point to some nervous factor, but of this there is no real histological evidence. The constant changes in the blood-vessels suggest the presence of a circulating toxin, and as the disease has been noted to follow the infectious fevers, toxins derived from microbic infection may play some, but probably a subsidiary, part in the causation of the disease. It has further been suggested that scleroderma is due to a disturbance of function in the endocrine system, a view based upon the occasional association of morphea with Graves' disease. The histological characters of the eruption vary with the stage and development of the disease; the principal and most constant feature is a general increase of the collagen without alteration of the elastin. There is also an obliteration of the capillaries from peri-arteritis and end-arteritis, upon which the atrophic changes depend. In the advanced stages the subcutaneous fatty tissue disappears and the muscles become sclerosed, and even the bones rarefied.

Symptoms

Localised scleroderma occurs as plaques, bands, or spots. The disease is met with twice as often in the female sex. The plaque form, sometimes termed morphea, is the least rare, appearing in its earliest stage as a reddish-blue or lilac patch, oval or irregular in shape, situated by preference on the neck, breasts, or sides of the trunk. The centre gradually becomes paler, the lilac tint being preserved at the periphery in the form of the well-known and characteristic "lilac ring" (Fig. 137). In this stage the patch is distinctly indurated, of an ivory white colour, seeming to be let into the skin. On the surface of the plaque there may be a few telangiectases, but these are by no means constantly present. The hair follicles and sweat glands are destroyed, and tactile sensation is usually diminished. The patches, on reaching full development, often remain stationary for years or undergo spontaneous resolution, leaving a superficial atrophic area with telangiectases, or they may completely disappear without trace. The number and size of the lesions vary in different cases, and while importance is attached to the presence of the lilac ring, this sign may be entirely wanting in the older elements. The band form of scleroderma is similar in its general aspect, except that, instead of being round or oval, the eruption assumes the form of a band or stripe (Fig. 136). This type is generally found



Fig. 135. Rhinophyma



Fig. 136. Sclerodermia



Fig. 137. Sclerodermia circumscripta



Fig. 138. Sclerodermia diffusa

on the limbs, but may also occur on the forehead, chest and elsewhere. In the guttate variety of the disease, the individual elements vary in size from a pin-head to a split pea, and appear as dead white spots in the skin of the neck and upper region of the trunk, either in groups or distributed irregularly. A local progressive form, beginning on the fingers, has been termed sclerodactyly. The atrophic changes are symmetrical, leading to a peculiar and striking deformity of the fingers, which become wasted and tapered. The process tends to spread upwards over the wrists, and may involve the muscles and tendons; the terminal phalanges sometimes undergo spontaneous amputation, leading to marked mutilation; if the fingers become flexed, painful ulcers develop over the knuckles. A similar condition may be met with on the toes.

Generalised Sclerodermia is usually insidious in its onset, the earlier stages being accompanied by joint pains, feverish bouts and possibly urticarial or erythematous rashes. As a rule the face, neck, and trunk are first involved, the tissues becoming swollen, so that movement of the affected regions is interfered with; the face is mask-like and expressionless. This so-called œdematous phase lasts for a variable period, after which improvement begins or an atrophic condition develops, the affected skin then becoming bound down and assuming a brown tint through which darker spots appear (Fig. 138). Later the subcutaneous fat disappears, and the muscles, if affected, are hard and atrophic, the patient becoming "hide-bound" and immobilised. Generalised sclerodermia may extend over considerable areas of the body, even the whole surface; the mucous membranes are sometimes also involved. The disease is slowly progressive through periods of months or years, death resulting from marasmus or some intercurrent disease. In those cases where recovery takes place, the disease does not pass beyond the so-called œdematous stage. Occasionally generalised sclerodermia has an abrupt onset and progresses rapidly to a fatal termination.

Diagnosis

The "œdematous" phase of generalised sclerodermia may be mistaken for renal or cardiac disease, but the fact that the tissues do not pit on pressure, and the absence of other signs of the latter diseases, serve to distinguish the condition. In keloid, which bears some resemblance to localised sclerodermia, the margin is irregular, the surfaces raised, and there is no lilac ring. Guttate sclerodermia differs from lichen planus in its dead white colour; it should be noted, however, that the synonym "white-spot disease" has been applied both to guttate sclerodermia and to certain forms of atrophic lichen planus. In the

earlier stages sclerodactyly may very closely resemble Raynaud's disease; in the fully developed form the atrophy and other characters are sufficiently distinctive.

Treatment

The treatment of generalised sclerodermia is mainly expectant, and aims at maintaining the general health and combating any obvious abnormal condition. Many remedies have been employed for the local forms, usually without much success. Improvement sometimes follows massage with olive oil, to which salicylic acid 1 per cent. may be added. X-rays and ultra-violet light appear to be of benefit in some cases, and thyroid may be given on the assumption that the disease is related to disturbance of the endocrine system.

Acrodermatitis Chronica Atrophicans (Plate 75, Fig. 140)

This disease is extremely rare in Great Britain, but appears to be more common in Central Europe. The eruption begins as a red patch, which gradually fades and is ultimately replaced by thin atrophic skin, through which the underlying vessels can be seen. Over the affected region the hair falls, and sweating is diminished or absent. The dorsal surfaces of the feet and hands are especially affected, the lesions appearing as bands or patches. No known treatment has any effect on the progress of this peculiar malady, the cause of which is obscure.

Radio-Dermatitis (Plate 76, Figs. 141 and 142)

X-rays and radium, employed in treatment of diseases of the skin, are capable of causing considerable damage if an excessive dose or too frequent small doses are administered.

The acute ulcer (Fig. 141) resulting from an overdose is generally covered with a tough diphtheroid membrane, is remarkably slow to heal, and leaves a pigmented scar behind. Besides this form of immediate reaction, the ill-effects of X-rays may be delayed for months or years, often long after the last dose has been given. In these cases the skin of the area previously treated gradually becomes atrophic, or even definitely scarred. Numerous telangiectases and pigmentary spots appear on the surface (Fig. 142), and warty elevations and even malignant disease may supervene. In the skin so affected, the chronic X-ray ulcer may develop as a small abrasion, which gradually increases in size. This ulcer is very painful, and, although superficial, is sluggish and heals badly. In the treatment of both the acute and the chronic forms of

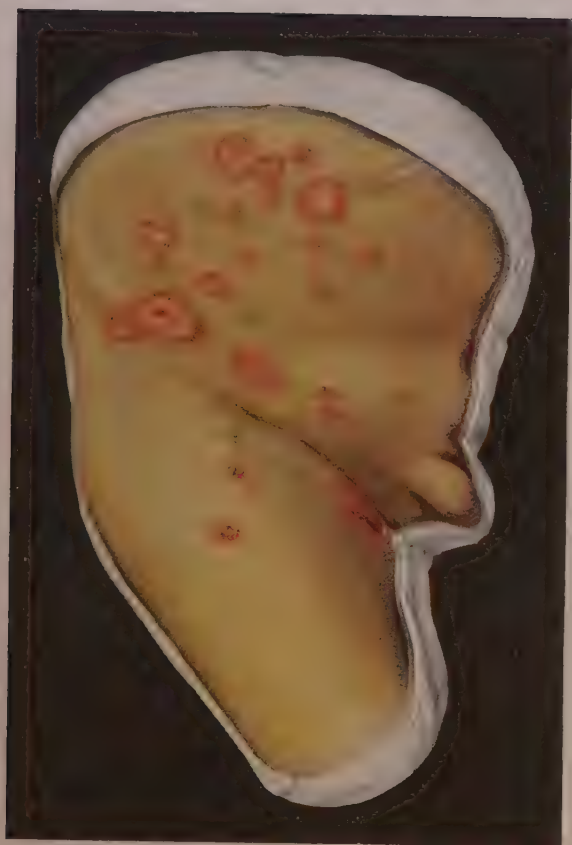


Fig. 139. Cutaneous diphtheria



Fig. 140. Acrodermatitis chronica atrophicans



Fig. 141. Ulcus e radiis Roentgen



Fig. 142. Cicatrix post ulcerationem
e radiis Roentgen

X-ray ulcer, it should be realised that even under the best conditions their course is protracted, and that attempts to accelerate healing by active or strong remedies will only do harm. In the earlier stages of the acute X-ray burn, calamine lotion or liniment or liquid paraffin may be used as a dressing. If infection occurs, fomentations or weak flavine solution (1 in 5,000) should be employed. Later, simple applications, such as boric ointment, are more suitable. In chronic radio-dermatitis some improvement may be effected by local applications of ultra-violet light. Any warty growth should be regarded with extreme suspicion, as malignant degeneration, with all its consequences, is not infrequently a sequel. In the treatment of chronic dermatoses with radium and X-rays, the possibility of delayed chronic radio-dermatitis should always be kept in mind, and avoided by limiting the number of doses and allowing a sufficient interval of time to elapse between their administration.

Hyperkeratosis and Dyskeratosis

Ichthyosis (Plate 77, Figs. 143 and 144)

A congenital deformity of the skin characterised by a peculiar dryness with scaling. The condition is markedly hereditary, and often affects several members of a family.

Symptoms

Various degrees of the affection are met with, from simple dryness with branny desquamation, often termed xerodermia, to a pronounced condition where well-marked, lozenge-shaped, discoloured scales cover large areas of the body. A localised variety of the disease is not infrequently observed on the extensor surfaces of the arms and thighs, confined to the orifices of the hair follicles, which appear as prominent, projecting points, each of which is capped with a tiny adherent scale. The affected extremities are dry, red, and rough, so much so that a considerable disfigurement results (keratosis pilaris, Fig. 144). In the medium forms the main features of the disease are well represented; the eruption is symmetrical and is especially developed over the extensor surfaces; in contrast, the flexures and the palms and soles are but little involved, and the face is more or less completely spared. The affected skin is discoloured, dry, rough, and dirty in appearance, forming various-sized gray, or brown, scales, which tend to curl up slightly at their margins. As a rule there is marked pityriasis of the scalp, and the hair is dry and brittle. Although ichthyosis is congenital in origin, and remains as a permanent deformity throughout life, it is not generally observed until the first or second year. In the mildest forms the condition may almost entirely disappear during the summer, but in all cases the skin is unusually sensitive to external irritants, such as cold or wind, and is liable to become chapped, and to develop patches of eczematoid dermatitis.



Fig.143. Ichthyosis simplex et serpentina



Fig. 144. Keratosis pilaris (Ichthyosis follicularis)



Fig. 145. Hyperkeratosis congenita diffusa maligna
(Ichthyosis foetalis)



Fig. 146. Morbus Darier (Dyskeratosis [follicularis] vegetans)

Pathology

The principal changes consist in the marked increase of the horny layer of the skin, with atrophy, or absence, of the sebaceous glands; contrary to what might be expected, the sweat glands are but little affected.

Treatment

Although from its nature the disease cannot be cured, much can be done to modify the dry condition of the skin and to render the patient more comfortable. The scales may be removed by hot baths, care being taken to avoid chapping; the skin is rendered more supple by lubrication with oil, or liquid paraffin to which a little starch may be added with advantage. Thyroid administered by the mouth appears to have a beneficial effect in certain cases. The liability to obstinate eczematoid dermatitis has already been mentioned, and suitable precautions should be taken to avoid this accident. Any eczematous eruption developing during the course of the disease is treated in the usual manner. The treatment of keratosis pilaris is similar, but it is generally necessary to employ an ointment containing salicylic acid to remove the adherent scales.

Hyperkeratosis Congenita Diffusa Maligna (Plate 78, Fig. 145)

In this very rare congenital affection, tough horny plates of round or angular form are found at birth, covering the body and face generally. The infant is often stillborn, and in such cases the name harlequin foetus is sometimes used. The severe or malignant form is incompatible with life, the child, even if born alive, soon dying from inflammatory conditions of the lungs, from secondary infection of the skin, or from purely mechanical disabilities.

The lesser form, termed *hyperkeratosis congenita diffusa benigna* (Fig. 147), is often mistaken for true ichthyosis, but differs in the tendency of the skin to general redness, and in the marked manner in which the flexures are involved, sometimes with papillomatous growths. The body is covered with large, dirty, lozenge-shaped scales; the face is usually affected, and there is ectropion.

Treatment is similar to that employed in ichthyosis, but has little effect on the course of the disease; the condition may, however, undergo some improvement with age.

Morbus Darier (Plate 78, Fig. 146)

Darier's disease, very rarely seen even in dermatological practice, has a certain superficial resemblance to ichthyosis, but actually differs

in all its essential features. The disease affects the face, especially the naso-labial furrows, the temples, scalp, presternal and interscapular regions, and also other parts of the body. The typical element consists of a crusted papule the size of a pin-head or larger, the crust occupying a funnel-shaped depression which usually corresponds to a pilo-sebaceous orifice. These lesions may be discrete or may occur in patches of variable dimensions. Microscopic examination shows an increase in the epidermis, horny plugs in the sebaceous follicles, and the presence of numerous characteristic round bodies formerly mistaken for psorosperms. Treatment aims at softening and removing the horny masses by baths, and ointments containing salicylic acid, but has actually little effect on the disease.

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Fig. 147. Hyperkeratosis congenita diffusa benigna

